160 890

STIC-Biotech/ChemLib

From: Chan, Christina
Sent: Thursday, July 28, 2005 6:57 PM
To: Nickol, Gary; STIC-Biotech/ChemLib
Subject: RE: RUSH: 09/675470

Please rush. Thanks Chris

Chris Chan
SPE, 1644
TC 1600 New Hire Training Coordinator
571-272-0841
Remsen 3E89

-----Original Message-----
From: Nickol, Gary
Sent: Thursday, July 28, 2005 12:57 PM
To: Chan, Christina
Subject: RUSH: 09/675470

This case is due at the end of the biweek. Please rush!

Please search the following as structures (and sequences, if possible--SEQ ID NOs: 1, 2, & 4) in the Registry file:

a) **NH3-norleucine-tyrosine-isoleucine-histidine-COO**

b) **NH3-norleucine-tyrosine-isoleucine-(6-amino-hexanoic acid)-CONH2**

c) **norleucine-tyrosine-leucine-ψ-$(CH_2$-$NH_2)^{3-4}$ -histidine-proline-phenylalanine-COO**

and a method of using them to inhibit angiogenesis/neovascularization.

Thanks,

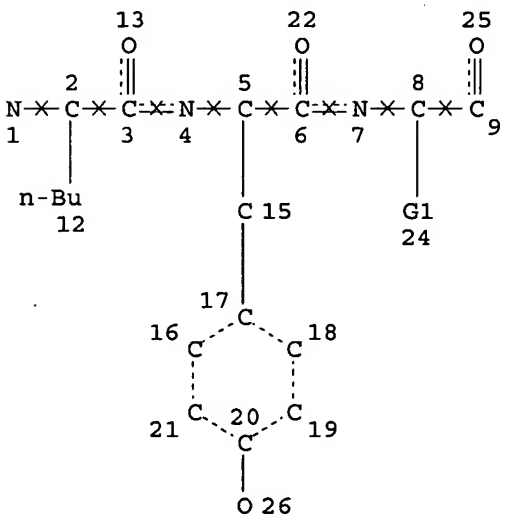
Gary B. Nickol
Art Unit 1642
Remsen, 3A11, Mailbox 3C18
(571)272-0835

****
STAFF USE ONLY
Searcher: am
Searcher Phone: 2-2504
Date Searcher Picked up: 7/29/05
Date Completed: 7/29/05
Searcher Prep/Rev. Time: 20
Online Time: ± 40

****
Type of Search
NA#:_____ AA#: ✓
Interference:____ SPDI:___
S/L:_____ Oligomer:____
Encode/Transl:_____
Structure#: ✓ Text:___
Inventor:____ Litigation:___

****
Vendors and cost where applicable
STN: ✓
DIALOG:_____
QUESTEL/ORBIT:_____
LEXIS/NEXIS:_____
SEQUENCE SYSTEM:_____
WWW/Internet:_____
Other(Specify):_____

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 13:09:56 ON 29 JUL 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   28 JUL 2005  HIGHEST RN 857521-63-2
DICTIONARY FILE UPDATES:  28 JUL 2005  HIGHEST RN 857521-63-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que l20
L17                 STR
```

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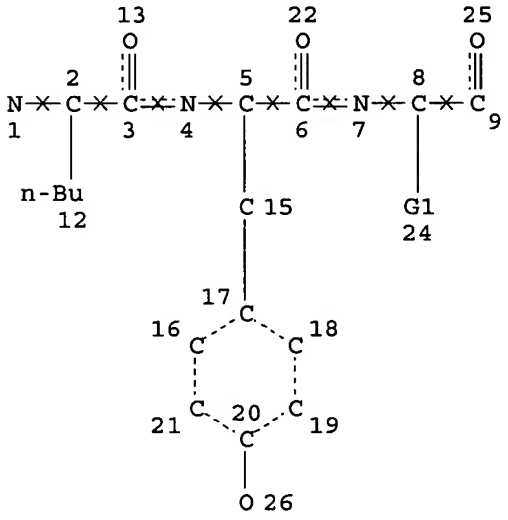
VAR G1=I-BU/S-BU
NODE ATTRIBUTES:
```

```
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  22

STEREO ATTRIBUTES: NONE
L19           46 SEA FILE=REGISTRY SSS FUL L17
L20           12 SEA FILE=REGISTRY ABB=ON  PLU=ON  L19 AND (C26H43N3O5 OR
                 C28H40N4O4 OR C29H42N4O5 OR C29H42N4O4 OR C27H47N5O4 OR
                 C34H50N4O7 OR C34H50N4O6 OR C29H42N4O5 OR C28H40N4O4 OR
                 C21H33N3O5 OR C21H34N4O4)


=> d sta que l21
L17               STR
```




```
VAR G1=I-BU/S-BU
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  22

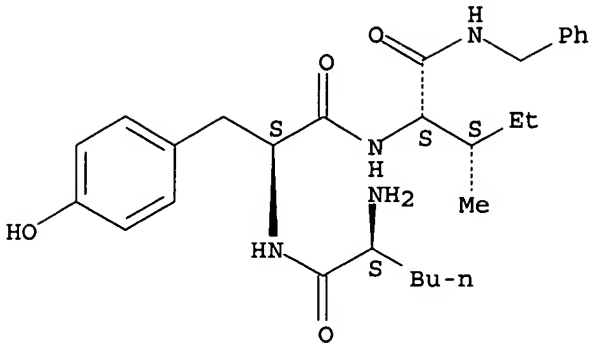
STEREO ATTRIBUTES: NONE
L19           46 SEA FILE=REGISTRY SSS FUL L17
L21            2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L19 AND C41H56N8O8


=> d l20 ide can tot

L20  ANSWER 1 OF 12  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   791762-46-4  REGISTRY
ED   Entered STN:  03 Dec 2004
CN   L-Isoleucinamide, L-norleucyl-L-tyrosyl-N-(phenylmethyl)- (9CI)  (CA INDEX
     NAME)
FS   STEREOSEARCH
MF   C28 H40 N4 O4
```

CI COM
SR CA

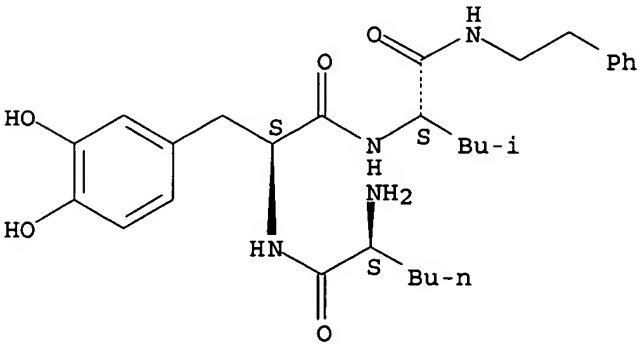
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 ANSWER 2 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 748112-76-7 REGISTRY
ED Entered STN: 19 Sep 2004
CN L-Leucinamide, L-norleucyl-3-hydroxy-L-tyrosyl-N-(2-phenylethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C29 H42 N4 O5**
CI COM
SR CA

Absolute stereochemistry.

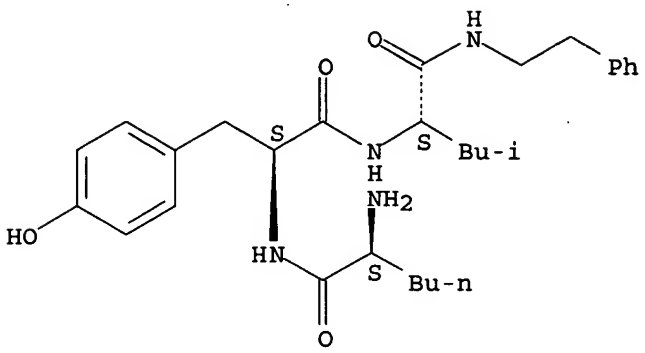


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 ANSWER 3 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 742041-00-5 REGISTRY
ED Entered STN: 10 Sep 2004
CN L-Leucinamide, L-norleucyl-L-tyrosyl-N-(2-phenylethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C29 H42 N4 O4**

CI COM
SR CA

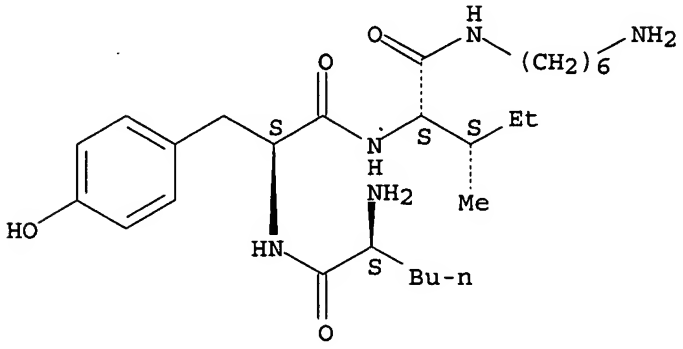
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L20 ANSWER 4 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 190140-91-1 REGISTRY
ED Entered STN: 20 Jun 1997
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl-N-(6-aminohexyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C27 H47 N5 O4**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

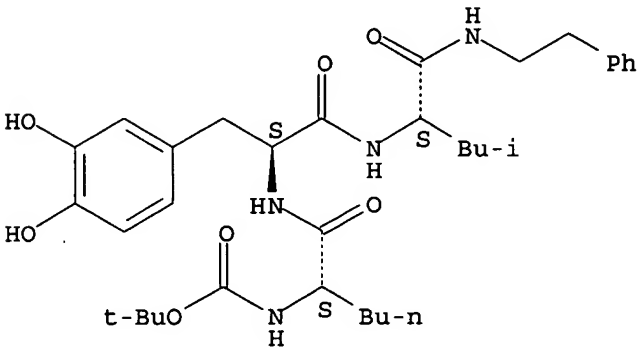
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:1228

L20 ANSWER 5 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 187678-68-8 REGISTRY
ED Entered STN: 27 Mar 1997

CN L-Leucinamide, N-[(1,1-dimethylethoxy)carbonyl]-L-norleucyl-3-hydroxy-L-tyrosyl-N-(2-phenylethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C34 H50 N4 O7**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

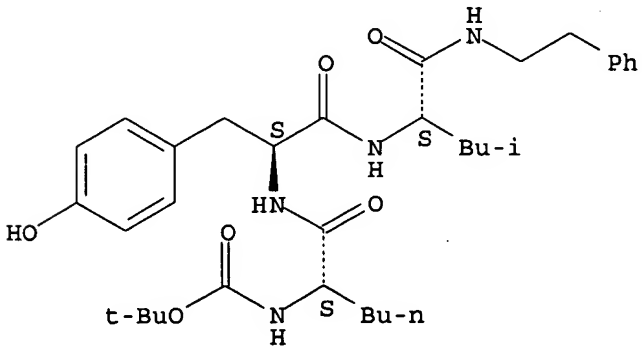


1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:186379

L20 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 187678-36-0 REGISTRY
ED Entered STN: 27 Mar 1997
CN L-Leucinamide, N-[(1,1-dimethylethoxy)carbonyl]-L-norleucyl-L-tyrosyl-N-(2-phenylethyl)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C34 H50 N4 O6**
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

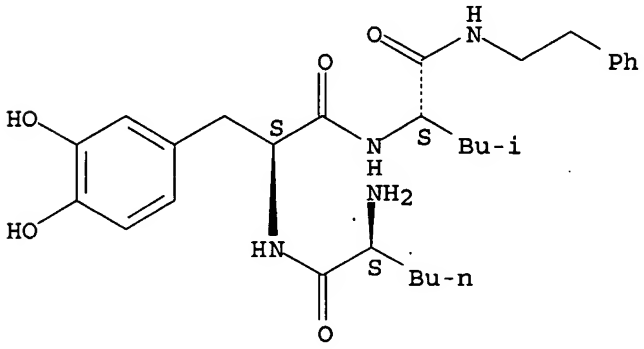
1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:186379

L20 ANSWER 7 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 187677-79-8 REGISTRY
ED Entered STN: 27 Mar 1997
CN L-Leucinamide, L-norleucyl-3-hydroxy-L-tyrosyl-N-(2-phenylethyl)-, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C29 H42 N4 O5 . Cl H**
SR CA
LC STN Files: CA, CAPLUS
CRN (748112-76-7)

Absolute stereochemistry.



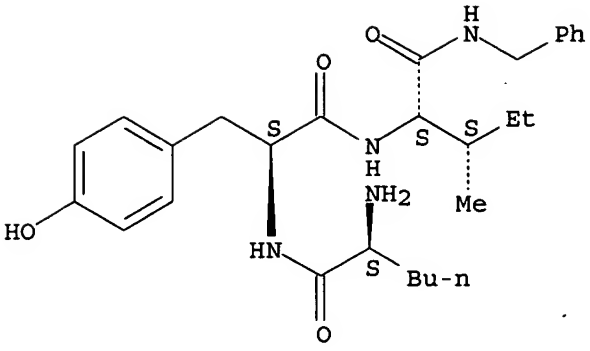
● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:186379

L20 ANSWER 8 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 187677-68-5 REGISTRY
ED Entered STN: 27 Mar 1997
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl-N-(phenylmethyl)-, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C28 H40 N4 O4 . Cl H**
SR CA
LC STN Files: CA, CAPLUS
CRN (791762-46-4)

Absolute stereochemistry.



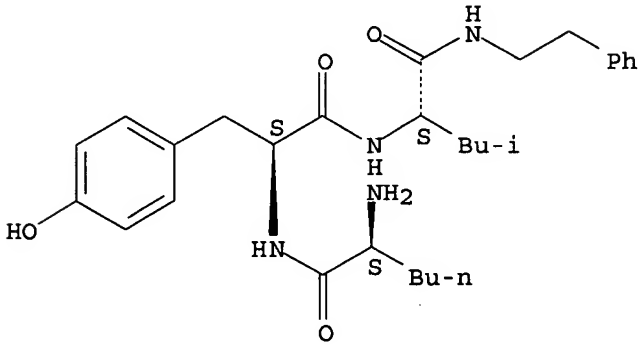
● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:186379

L20 ANSWER 9 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 187677-62-9 REGISTRY
ED Entered STN: 27 Mar 1997
CN L-Leucinamide, L-norleucyl-L-tyrosyl-N-(2-phenylethyl)-, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C29 H42 N4 O4 . Cl H**
SR CA
LC STN Files: CA, CAPLUS
CRN (742041-00-5)

Absolute stereochemistry.



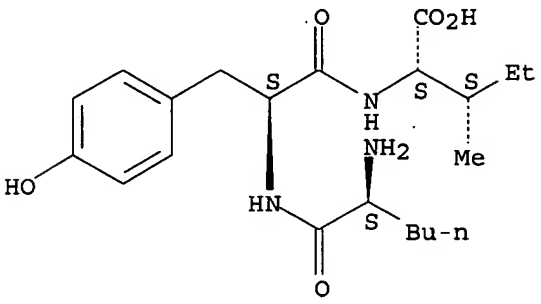
● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 126:186379

L20 ANSWER 10 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 154272-77-2 REGISTRY
ED Entered STN: 08 Apr 1994
CN L-Isoleucine, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN L-Isoleucine, N-(N-L-norleucyl-L-tyrosyl)-
FS STEREOSEARCH
MF **C21 H33 N3 O5**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

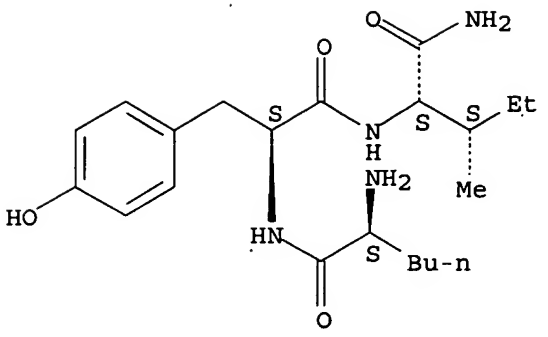
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:132780

REFERENCE 2: 120:237098

L20 ANSWER 11 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 154272-76-1 REGISTRY
ED Entered STN: 08 Apr 1994
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C21 H34 N4 O4**
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 132:132780

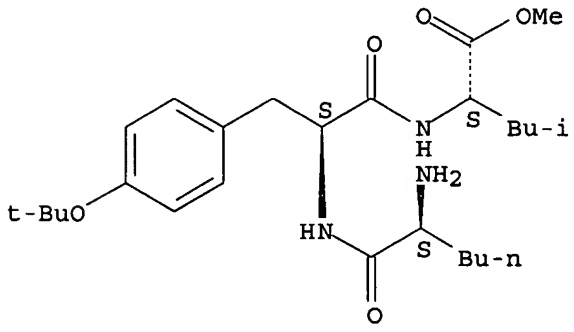
REFERENCE 2: 131:54097

REFERENCE 3: 125:77271

REFERENCE 4: 120:237098

L20 ANSWER 12 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN 92779-23-2 REGISTRY
ED Entered STN: 17 Dec 1984
CN L-Leucine, N-[O-(1,1-dimethylethyl)-N-L-norleucyl-L-tyrosyl]-, methyl ester (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF **C26 H43 N3 O5**
LC STN Files: CA, CAPLUS

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 101:211689

=> d l21 sqide can tot

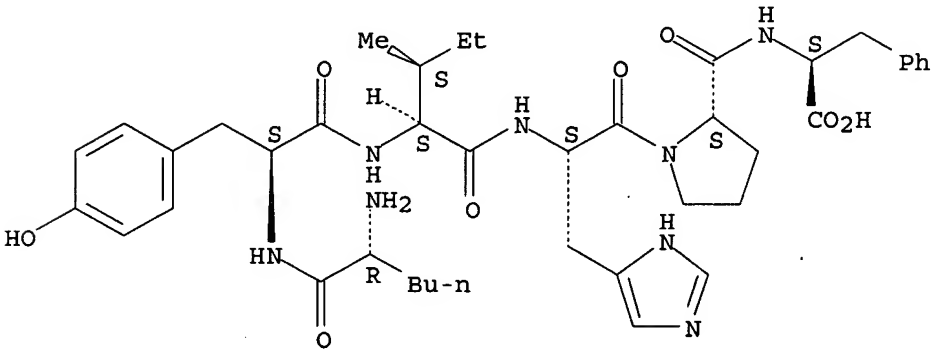
L21 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 160039-68-9 REGISTRY
CN Angiotensin II, 1-de-L-aspartic acid-2-de-L-arginine-3-D-norleucine-5-L-isoleucine- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN [D-Nle1,Ile3]-angiotensin IV
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 6
NTE

type	location		description
uncommon	Nle-1	-	-

SEQ 1 XYIHPF

RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF **C41 H56 N8 O8**
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties)

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 122:46717

L21 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 154272-72-7 REGISTRY
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Angiotensin II, 1-de-L-aspartic acid-2-de-L-arginine-3-L-norleucine-5-L-isoleucine-

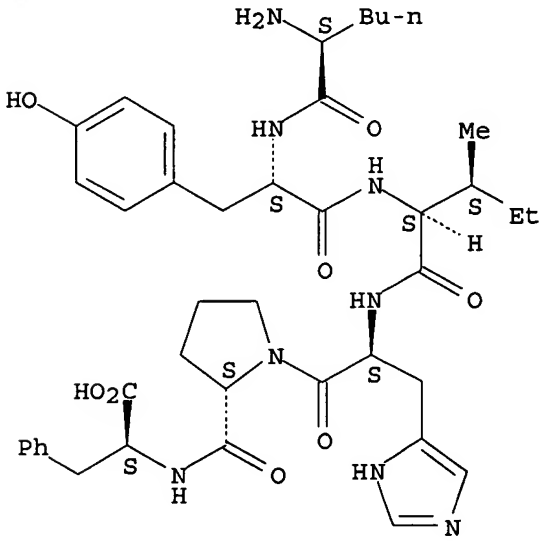
OTHER NAMES:
CN [Nle1,Ile3]-Angiotensin IV
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL 6
NTE

type	------ location ------		description
uncommon	Nle-1	-	-

SEQ 1 XYIHPF

RELATED SEQUENCES AVAILABLE WITH SEQLINK
MF **C41 H56 N8 O8**
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PROC (Process)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties); USES (Uses)

Absolute stereochemistry.



17 REFERENCES IN FILE CA (1907 TO DATE)
17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:82810

REFERENCE 2: 140:332967

REFERENCE 3: 139:317971

REFERENCE 4: 139:95766

REFERENCE 5: 136:211023

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REFERENCE   6:  134:305729

REFERENCE   7:  134:276139

REFERENCE   8:  134:66685

REFERENCE   9:  132:132780

REFERENCE  10:  131:153977


=> d his

     (FILE 'HOME' ENTERED AT 12:38:53 ON 29 JUL 2005)
                SET COST OFF

     FILE 'HCAPLUS' ENTERED AT 12:39:12 ON 29 JUL 2005
                E PRENDERGAST P/AU
L1           28 S E3,E6,E7
                E READING C/AU
L2           76 S E3,E7,E11,E13,E15-E17
                E FRINCKE J/AU
L3           41 S E3,E4,E6-E8
                E HOLLIS/PA,CS
L4           12 S E5-E12
L5           42 S E3,E4 NOT L4
L6          132 S L1-L4

     FILE 'REGISTRY' ENTERED AT 12:41:15 ON 29 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 12:41:38 ON 29 JUL 2005
                SET SMARTSELECT ON
L7          SEL L6 1- RN :    1783 TERMS
                SET SMARTSELECT OFF

     FILE 'REGISTRY' ENTERED AT 12:41:43 ON 29 JUL 2005
L8         1783 S L7
L9          240 S L8 AND SQL/FA
L10         161 S L9 AND PROTEIN/FS
L11          41 S L10 AND SQL<=10
                E 'NLE'TIH/SQEP
L12             STR
L13             STR L12
L14           0 S L13
L15             STR L13
L16           0 S L15
L17             STR L15
L18           0 S L17
L19          46 S L17 FUL
                SAV TEMP L19 NICKOL675/A
L20          12 S L19 AND (C26H43N3O5 OR C28H40N4O4 OR C29H42N4O5 OR C29H42N4O4
L21           2 S L19 AND C41H56N8O8

     FILE 'HCAOLD' ENTERED AT 13:01:08 ON 29 JUL 2005
L22           0 S L20
L23           0 S L21

     FILE 'HCAPLUS' ENTERED AT 13:01:11 ON 29 JUL 2005
L24           7 S L20
L25          17 S L21
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```
L26           0 S L6 AND L24
L27           0 S L6 AND L25
L28          14 S L24,L25 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
                E NEOVASCULAR/CT
                E E4+ALL
L29        3407 S E2
L30      137932 S E6+OLD,NT,PFT,RT
L31         409 S E8,E9
                E ANGIOGENESIS/CT
L32       19419 S E3-E10
L33      101190 S E3+OLD,NT,PFT,RT
L34       22747 S E14+OLD,NT,PFT,RT
                E E3+ALL
L35      168957 S E13+OLD,NT
L36           5 S L24,L25 AND L29-L35
L37          21 S L24,L25 AND (?NEOVASCUL? OR ?ANGIO?)
L38          13 S L28 AND L36,L37
L39           4 S L24,L25 AND P/DT
L40          13 S L38,L39
L41           4 S US20030083231/PN OR (US2002-087929# OR US2000-675470# OR WO20
                SEL RN

     FILE 'REGISTRY' ENTERED AT 13:07:45 ON 29 JUL 2005
L42         228 S E1-E228
L43           0 S L42 AND L19
L44         227 S L42 NOT SQL/FA
L45          42 S L44 NOT C5-C6-C6-C6/ES
L46           1 S L42 NOT L44

     FILE 'USPATFULL' ENTERED AT 13:09:41 ON 29 JUL 2005
L47           2 S L20 OR L21

     FILE 'REGISTRY' ENTERED AT 13:09:56 ON 29 JUL 2005

=> => => e 'nle'-ti/sqep
E1            1     'NLE'TGWMDF/SQEP
E2            1     'NLE'THL'BAL-BAL'R'NLE'/SQEP
E3            0 --> 'NLE'TI/SQEP
E4            1     'NLE'TLR/SQEP
E5            4     'NLE'TPK/SQEP
E6            2     'NLE'TPK'OAA'G/SQEP
E7            2     'NLE'TPR/SQEP
E8            1     'NLE'TQY/SQEP
E9            1     'NLE'TYS'BAL-BAL'R'NLE'/SQEP
E10           1     'NLE'V'BAL'WMH/SQEP
E11           1     'NLE'V'STA'A/SQEP
E12           1     'NLE'VAE'BAL-BAL'R'NLE'/SQEP


=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 13:12:21 ON 29 JUL 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)
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FILE COVERS 1907 - 29 Jul 2005 VOL 143 ISS 6
FILE LAST UPDATED: 28 Jul 2005 (20050728/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 140 all hitstr tot

L40 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:95957 HCAPLUS
DN 132:132780
ED Entered STN: 10 Feb 2000
TI Methods of identifying agonists or antagonists of **angiotensin** IV
IN Harding, Joseph W.; Wright, John W.
PA Washington State University Research Foundation, USA
SO U.S., 62 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM G01N033-567
ICS C07K007-14
INCL 435007210
CC 2-10 (Mammalian Hormones)
Section cross-reference(s): 1
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 6022696	A	20000208	US 1998-54308	19980402	<--
	US 5854388	A	19981229	US 1994-360784	19941222	<--
PRAI	US 1994-360784	A3	19941222	<--		
	WO 1993-US6038	W	19930624	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
US 6022696	ICM	G01N033-567	
	ICS	C07K007-14	
	INCL	435007210	
US 6022696	NCL	435/007.210; 435/007.100; 435/007.200; 530/316.000; 530/329.000	
	ECLA	C07K007/14; G01N033/74	<--
US 5854388	NCL	530/329.000; 436/548.000; 514/017.000; 514/018.000; 530/330.000; 530/331.000; 530/387.200; 530/387.900; 530/388.240	
	ECLA	C07K005/10A1B; C07K007/14; C07K014/72	<--

OS MARPAT 132:132780
AB A unique and novel **angiotensin** AT4 receptor and AIV ligand system for binding a small N-terminal hexapeptide fragment of **Angiotensin** II (referred to as AIV, with amino acid sequence Val1 -Tyr2 -Ile3 -His4 -Pro5 -Phe6; SEQ. ID. NO. 1) is disclosed. AIV ligand binds saturably, reversibly, specifically, and with high affinity to membrane AT4 receptors in a variety of tissues, including heart, lung, kidney, aorta, brain, liver, and uterus, from many animal species. The

AT4 receptor is pharmacol. distinct from classic **angiotensin** receptors (AT1 or AT2). The system employs AIV or C-terminally truncated or extended AIV-like peptides (e.g., VYIHPFX; SEQ. ID. NO. 8) as the signaling agent, and the AT4 plasma membrane receptor as the detection mechanism. The **angiotensin** AT4 receptor and receptor fragments (including the receptor binding site domain) are capable of binding a VYIHPF (SEQ. ID. NO. 1) **angiotensin** AIV N-terminal peptide but not an **angiotensin** AII or AIII N-terminal peptide, i.e., DRVYIHPF (SEQ. ID. NO. 2) or RVYIHPF (SEQ. ID. NO. 3), resp. Also disclosed are processes for isolating **angiotensin** AT4 receptor and AIV **angiotensinase**, identifying **angiotensin** AIV agonists and antagonists, and constructing diagnostic assays to specifically measure AIV and AI-specific **angiotensinase** in biol. fluids. In this continuation in part a method for screening for an agent that is an agonist or an antagonist of the interaction between an **angiotensin** IV ligand and an **angiotensin** IV receptor and a method for identifying the presence of an inhibitor of **angiotensin** IV ligand binding to an **angiotensin** IV receptor in a biol. fluid are specifically claimed.

ST **angiotensin** IV agonist antagonist screening detn

IT **Angiotensin** receptors
RL: ANT (Analyte); BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process)
(AT4; methods of identifying agonists or antagonists of **angiotensin** IV)

IT Adrenal cortex
Adrenal medulla
Brain
Heart
Kidney
Liver
Lung
Uterus
(**angiotensin** IV receptor AT4 receptor in)

IT **Artery**
(aorta; **angiotensin** IV receptor AT4 receptor in)

IT Diagnosis
(diagnostic assays to specifically measure **angiotensin** IV and **angiotensin** I-specific **angiotensinase** in biol. fluids)

IT Drug screening
(methods of identifying agonists or antagonists of **angiotensin** IV)

IT Antibodies
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(monoclonal; production of antibodies to **angiotensin** IV receptor)

IT Structure-activity relationship
(of agonists or antagonists of **angiotensin** IV)

IT **Vein**
(venule, coronary; **angiotensin** IV receptor AT4 receptor in)

IT 9012-48-0P, **Angiotensinase**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(isolation, purification, and characterization of the **angiotensin** IV **angiotensinase**)

IT 12676-15-2, **Angiotensin** IV 37827-06-8 51833-69-3

51833-78-4 52530-60-6 59817-04-8 75679-18-4 122483-84-5
124750-99-8, DuP753 125728-60-1 127060-75-7, CGP42112A 151341-79-6
151896-03-6 151896-04-7 151896-05-8 151896-06-9 151896-07-0
151896-08-1 151896-09-2 151896-10-5 151896-11-6 151896-12-7
151923-88-5 154272-69-2 154272-70-5 154272-71-6 **154272-72-7**
154272-73-8 154272-74-9 154272-75-0 **154272-76-1**
154272-77-2 154272-78-3 154272-79-4 154295-26-8
154295-27-9 154295-28-0
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(methods of identifying agonists or antagonists of **angiotensin** IV)

IT 256649-87-3 256649-88-4 256649-89-5 256649-90-8 256649-91-9
256649-92-0 256649-94-2 256649-95-3 256649-96-4 256649-97-5
256649-98-6 256649-99-7 256650-00-7 256650-01-8 256650-02-9
RL: PRP (Properties)
(unclaimed protein sequence; methods of identifying agonists or antagonists of **angiotensin** IV)

IT 484-42-4 4474-91-3 4503-63-3 5939-49-1 13602-53-4 55714-12-0
56317-01-2 58910-82-0 91999-74-5 151341-80-9 160039-45-2
160039-50-9 160039-55-4 160039-63-4 248600-06-8 256514-58-6
256514-60-0
RL: PRP (Properties)
(unclaimed sequence; methods of identifying agonists or antagonists of **angiotensin** IV)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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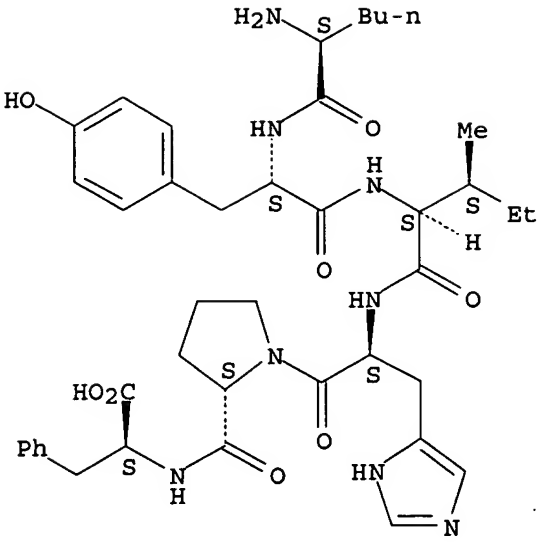
IT **154272-72-7 154272-76-1 154272-77-2**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(methods of identifying agonists or antagonists of **angiotensin** IV)

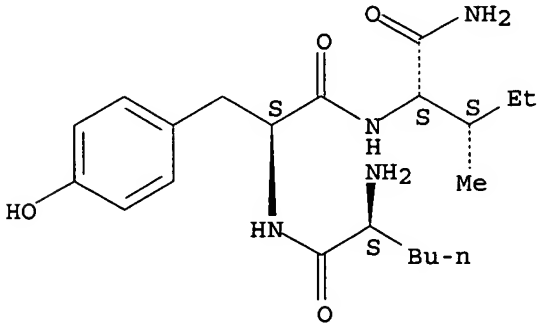
RN 154272-72-7 HCAPLUS
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



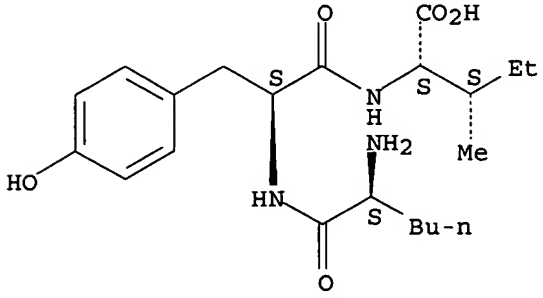
RN 154272-76-1 HCAPLUS
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 154272-77-2 HCAPLUS
CN L-Isoleucine, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:360084 HCAPLUS
DN 131:153977
ED Entered STN: 11 Jun 1999
TI **Angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation
AU Slinker, Bryan K.; Wu, Yiming; Brennan, Adam J.; Campbell, Kenneth B.; Harding, Joseph W.
CS Department of Veterinary and Comparative Anatomy, Pharmacol. and Physiol., Washington State University, Pullman, WA, 99164-6520, USA
SO Cardiovascular Research (**1999**), 42(3), 660-669
CODEN: CVREAU; ISSN: 0008-6363
PB Elsevier Science B.V.
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB Objective: A novel **angiotensin** receptor has been described and named AT4. Ligands for this receptor include the **angiotensin** II (Ang II) metabolite Ang II (3-8), known as **angiotensin** IV (Ang IV). There is 10-fold more AT4 receptor than AT1 receptor in rabbit myocardium. The AT4 receptor has a high affinity for Ang IV (Ki in rabbit myocardium <2 + 10-9) and similar ligands, but very low affinity for Ang II (Ki in rabbit myocardium >10-6). Although several functions have been attributed to the novel Ang IV peptide/AT4 receptor system, the effect of this system on left ventricular (LV) function has not been studied. We hypothesized (1) that Ang IV would affect LV function and (2) that any effects would be opposite to those of Ang II. Methods: Using the buffer-perfused (30°) isolated rabbit heart, we studied the effect of the AT4 agonist Nle1-Ang IV on LV systolic function, quantified using both Frank-Starling and end-systolic pressure-volume relationships, and relaxation. We also studied the effect of the AT1/AT2 agonist, Sar1-Ang II on LV function. Finally, because the profile of effect of Nle1-Ang IV was similar to the reported effect of nitric oxide (NO), we also studied the effect of Nle1-Ang IV in the presence of the NO synthase inhibitor NG-monomethyl-L-arginine. Results: Nle1-Ang IV reduced LV pressure-generating capability at any volume but increased the sensitivity of pressure development to volume change. Nle1-Ang IV reduced LV ejection capability. Sar1-Ang II had the opposite effect, increasing both pressure generation and ejection capability. Finally, both Sar1-Ang II and Nle1-Ang IV speeded LV relaxation. Inhibition of NO synthase did not alter the effect of Nle1-Ang IV on LV systolic function or relaxation. Conclusions: AT4 receptor agonism has mixed effects on LV systolic function, depressing pressure-generation and ejection capabilities, but enhancing the sensitivity of pressure development to volume change. It also speeds relaxation. The effect of Ang IV on systolic function is generally opposite to the effect of Ang II, whereas the Ang IV influence on relaxation is similar to the effect of Ang II.
ST **angiotensin** IV ventricle systolic function relaxation
IT **Angiotensin** receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT4; **angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)
IT Cardiac contraction
Signal transduction, biological
(**angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)
IT Heart
(left ventricle; **angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)

IT 59680-38-5, Sar1-**angiotensin** II **154272-72-7**,
[Nle1,Ile3]-**Angiotensin** IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)
IT 10102-43-9, Nitric oxide, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)
IT 12676-15-2, **Angiotensin** IV
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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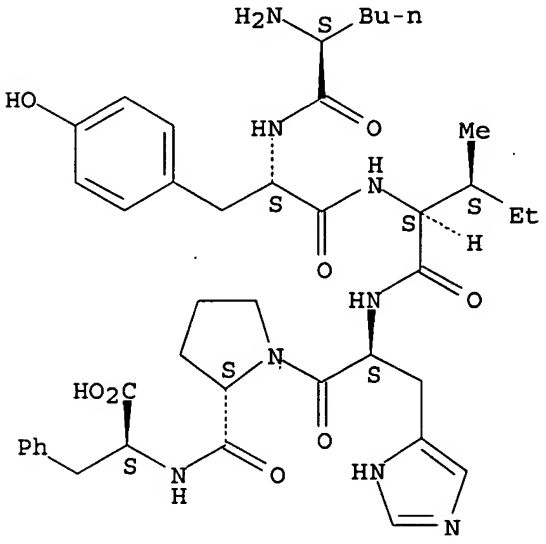
IT **154272-72-7**, [Nle1,Ile3]-**Angiotensin** IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**angiotensin** IV has mixed effects on left ventricle systolic function and speeds relaxation and mechanisms therein)
RN 154272-72-7 HCAPLUS
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:309989 HCAPLUS
DN 131:83430
ED Entered STN: 21 May 1999
TI Contributions of the brain **angiotensin** IV-AT4 receptor subtype system to spatial learning
AU Wright, John W.; Stubley, Leighann; Pederson, Eric S.; Kramar, Eniko A.; Hanesworth, Jodi M.; Harding, Joseph W.
CS Departments of Psychology, Veterinary and Comparative Anatomy, Pharmacology, and Physiology, and Program in Neuroscience, Washington State University, Pullman, WA, 99164, USA
SO Journal of Neuroscience (**1999**), 19(10), 3952-3961
CODEN: JNRSDS; ISSN: 0270-6474
PB Society for Neuroscience
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB The development of navigational strategies to solve spatial problems appears to be dependent on an intact hippocampal formation. The circular water maze task requires the animal to use extramaze spatial cues to locate a pedestal positioned just below the surface of the water. Presently, we investigated the role of a recently discovered brain **angiotensin** receptor subtype (AT4) in the acquisition of this spatial learning task. The AT4 receptor subtype is activated by **angiotensin** IV (AngIV) rather than **angiotensins** II or III, as documented for the AT1 and AT2 receptor subtypes, and is heavily distributed in the CA1-CA3 fields of the hippocampus. Chronic

intracerebroventricular infusion of a newly synthesized AT4 agonist (norleucine1-AngIV) via osmotic pump facilitated the rate of acquisition to solve this task, whereas treatment with an AT4 receptor antagonist (Divalinal) significantly interfered with the acquisition of successful search strategies. Animals prepared with bilateral knife cuts of the perforant path, a major afferent hippocampal fiber bundle originating in the entorhinal cortex, displayed deficits in solving this task. This performance deficit could be reversed with acute intracerebroventricular infusion of a second AT4 receptor agonist (Norleucinal). These results suggest that the brain AngIV-AT4 system plays a role in the formation of spatial search strategies and memories. Further, application of an AT4 receptor agonist compensated for spatial memory deficits in performance accompanying perforant path knife cuts. Possible mechanisms underlying this compensatory effect are discussed.

ST brain,**angiotensin** AT4 receptor spatial learning

IT **Angiotensin** receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT4; brain **angiotensin** IV AT4 receptor contribution to spatial learning)

IT Brain
(brain **angiotensin** IV AT4 receptor contribution to spatial learning)

IT Brain
(hippocampus; brain **angiotensin** IV AT4 receptor contribution to spatial learning)

IT Learning
(spatial; brain **angiotensin** IV AT4 receptor contribution to spatial learning)

IT Memory, biological
(spatial; brain **angiotensin** IV AT4 receptor contribution to spatial learning and memory)

IT 23025-68-5, Ile3-**angiotensin** IV 52530-60-6 **154272-72-7**
, [Nle1,Ile3]-**Angiotensin** IV 160039-71-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(brain **angiotensin** IV AT4 receptor contribution to spatial learning)

RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD

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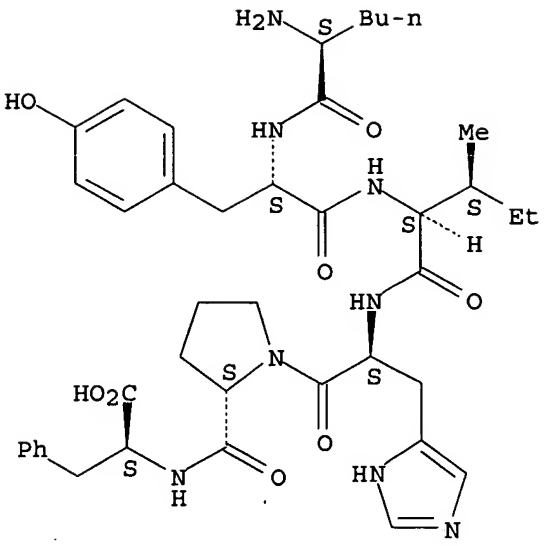
IT **154272-72-7**, [Nle1,Ile3]-**Angiotensin** IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(brain **angiotensin** IV AT4 receptor contribution to spatial learning)

RN 154272-72-7 HCAPLUS

CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:275130 HCAPLUS
DN 131:54097
ED Entered STN: 05 May 1999
TI Structural analysis of **angiotensin** IV receptor (AT4) from selected bovine tissues
AU Zhang, Jian-Hua; Hanesworth, Jodie M.; Sardinia, Michael F.; Alt, Jeremiah A.; Wright, John W.; Harding, Joseph W.
CS Department of Veterinary and Comparative Anatomy, Physiology and Pharmacology, Washington State University, Pullman, WA, USA
SO Journal of Pharmacology and Experimental Therapeutics (**1999**), 289(2), 1075-1083
CODEN: JPETAB; ISSN: 0022-3565
PB American Society for Pharmacology and Experimental Therapeutics
DT Journal
LA English
CC 2-2 (Mammalian Hormones)
AB The **angiotensin** IV receptor (AT4) receptor is widely distributed in both species and tissues. This broad distribution appears to be reflected in an equally diverse repertoire of physiol. actions that are mediated through AT4 receptors. This breadth of location and function of AT4 receptors encourages speculation that multiple AT4 isoforms might exist. In this study, we compared the structural properties of bovine AT4 receptors from adrenals, kidney, heart, thymus, bladder, aorta, and hippocampus. These comparisons were made using PAGE or HPLC anal. of AT4 receptors that had been covalently radiolabeled with the AT4-specific photoprobe 125I-benzoyl phenylalanine-**angiotensin** IV. Except for the hippocampal AT4 receptor, the binding subunit in all tissues had a mol. mass of approx. 165 kDa and associated with addnl. subunits via disulfide linkages. The hippocampal receptor was significantly smaller (150 kDa) and did not appear to possess other disulfide-linked subunits. The receptor was highly glycosylated in all tissues examined Peptide mapping following cleavage of 125I-labeled receptor with endopeptidase C or cyanogen bromide resulted in complex cleavage patterns. Together these mapping studies demonstrated the uniqueness of the hippocampal receptor and further suggested that other AT4 isoforms may exist and be variably distributed among bovine tissues. In agreement with the peptide mapping

studies, differences in the binding pattern of several AngIV analogs were observed among the various tissues.

ST **angiotensin** IV receptor structural analysis tissue

IT **Angiotensin** receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(AT4; structural anal. of **angiotensin** IV receptor (AT4) from selected bovine tissues)

IT **Artery**
(aorta; structural anal. of **angiotensin** IV receptor (AT4) from selected bovine tissues)

IT Brain
(hippocampus; structural anal. of **angiotensin** IV receptor (AT4) from selected bovine tissues)

IT Adrenal gland
Bladder
Heart
Kidney
Thymus gland
(structural anal. of **angiotensin** IV receptor (AT4) from selected bovine tissues)

IT 23025-68-5 **154272-76-1** 228407-05-4 228407-06-5 228407-07-6
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**angiotensin** IV analogs binding to various bovine tissues)

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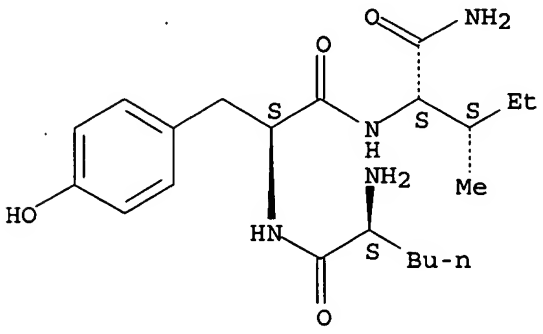
IT **154272-76-1**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**angiotensin** IV analogs binding to various bovine tissues)

RN 154272-76-1 HCAPLUS
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:50257 HCAPLUS
DN 130:247387
ED Entered STN: 26 Jan 1999
TI Opposite effect of **angiotensin** II and IV in the lateral nucleus of the amygdala
AU Von Bohlen und Halbach, Oliver; Albrecht, Doris
CS Institute of Physiology, Faculty of Medicine (Charite), Humboldt University, Berlin, Germany
SO Brain Research Bulletin (**1998**), 47(4), 311-315
CODEN: BRBUDU; ISSN: 0361-9230
PB Elsevier Science Inc.
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB In this study the effects of **angiotensin** II and norleucine1-**angiotensin** IV have been studied in a horizontal in vitro slice preparation of female rat brains. Extracellular field potentials of the lateral nucleus of the basolateral amygdala were recorded. The results show that **angiotensin** II significantly increased the amplitude of field potentials induced by the elec. stimulations of the lateral nucleus, whereas norleucine1-**angiotensin** IV caused a significant decrease in the amplitude of field potentials. The **angiotensin** -induced effects could be blocked by specific **angiotensin** receptor antagonists. These opposite effects of **angiotensin** II and IV on electrophysiol. parameters are in agreement with behavioral studies that have demonstrated that **angiotensin** II and IV produce opposite effects on the retention of an inhibitor shock-avoidance response and correlate with their different effects on the blood vessels.
ST **angiotensin** amygdala neurotransmission AT receptor
IT **Angiotensin** receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT1; opposite effect of **angiotensin** II and IV on field potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)
IT **Angiotensin** receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT2; opposite effect of **angiotensin** II and IV on field

potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)

IT **Angiotensin** receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT4; opposite effect of **angiotensin** II and IV on field potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)

IT Brain
(amygdala, basolateral nucleus; opposite effect of **angiotensin** II and IV on field potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)

IT Neurotransmission
(opposite effect of **angiotensin** II and IV on field potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)

IT 11128-99-7, **Angiotensin**-II **154272-72-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(opposite effect of **angiotensin** II and IV on field potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)

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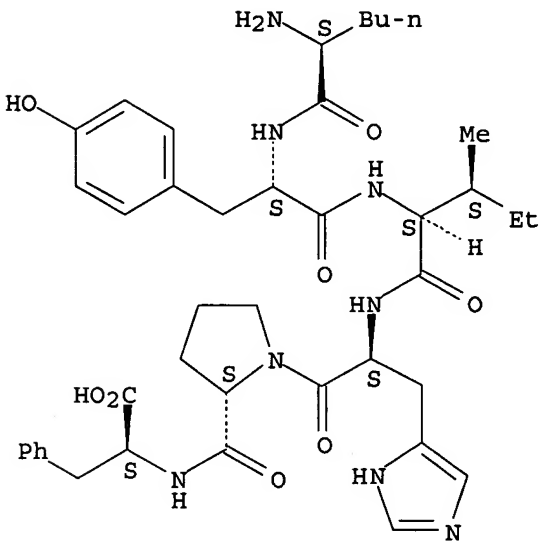
IT **154272-72-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)
(opposite effect of **angiotensin** II and IV on field potentials within lateral nucleus of amygdala involve specific **angiotensin** receptors)

RN 154272-72-7 HCAPLUS
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:416409 HCAPLUS
DN 129:157304
ED Entered STN: 08 Jul 1998
TI Role of nitric oxide in **angiotensin** IV-induced increases in cerebral blood flow
AU Kramar, Eniko A.; Krishnan, Radhika; Harding, Joseph W.; Wright, John W.
CS Departments of Psychology and Veterinary and Comparative Anatomy, Pharmacol. Physiol., Program in Neuroscience, Washington State University, Pullman, WA, 99164-4820, USA
SO Regulatory Peptides (**1998**), 74(2,3), 185-192
CODEN: REPPDY; ISSN: 0167-0115
PB Elsevier Science B.V.
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB The present study investigated the effects of three newly synthesized **angiotensin** IV (AngIV) analogs (lysine1-AngIV, norleucine1-AngIV, and norleucinal) on cerebral blood flow (CBF) in anesthetized Sprague-Dawley rats utilizing laser-Doppler flowmetry. The results indicate that internal carotid infusions of AngIV, norleucine1-AngIV, norleucinal, and lysine1-AngIV increased CBF above baseline by 25, 32, 33 and 44%, resp., without changing systemic arterial blood pressure. In a second experiment sep. groups of rats were pretreated with nitric oxide (NO) synthase inhibitor, Nω-nitro-L-arginine Me ester (l-NAME) or saline, followed by AngIV or norleucinal for the purpose of evaluating the hypothesis that the mechanism of action of these compds. is linked to the release of NO. Pretreatment with saline followed by AngIV and norleucinal increased CBF by 29 and 39%, resp., while pretreatment with l-NAME blocked

the vasodilatory effects of AngIV and norleucinal, suggesting that the increment in blood flow induced by these compds. is dependent upon the synthesis and release of NO from vascular endothelial cells.

ST nitric oxide **angiotensin** IV brain circulation

IT Circulation
(cerebral; nitric oxide in **angiotensin** IV-induced increases in cerebral blood flow)

IT 10102-43-9, Nitric oxide, biological studies
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(nitric oxide in **angiotensin** IV-induced increases in cerebral blood flow)

IT 23025-68-5, Ile3-**angiotensin** IV **154272-72-7**, [Nle1,Ile3]-**Angiotensin** IV 154295-26-8, [Lys1,Ile3]-**Angiotensin** IV 160039-71-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nitric oxide in **angiotensin** IV-induced increases in cerebral blood flow)

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD

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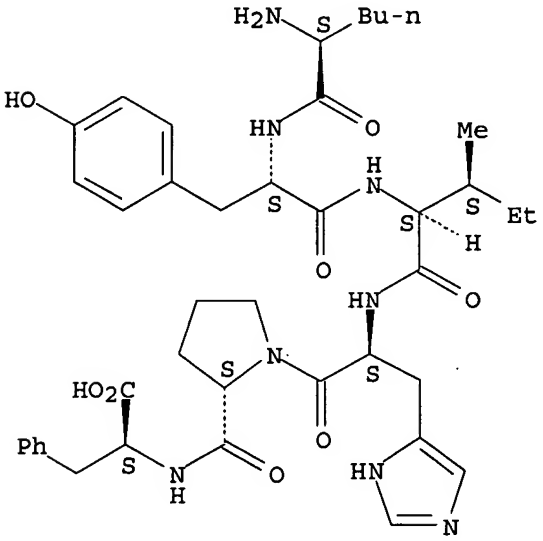
IT **154272-72-7**, [Nle1,Ile3]-**Angiotensin** IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nitric oxide in **angiotensin** IV-induced increases in cerebral blood flow)

RN 154272-72-7 HCAPLUS

CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:416398 HCAPLUS

DN 129:157298

ED Entered STN: 08 Jul 1998

TI Attenuation of scopolamine-induced spatial learning impairments by an **angiotensin** IV analog

AU Pederson, Eric S.; Harding, Joseph W.; Wright, John W.

CS Program in Neuroscience, Washington State University, Pullman, WA, 99164, USA

SO Regulatory Peptides (**1998**), 74(2,3), 97-103
CODEN: REPPDY; ISSN: 0167-0115

PB Elsevier Science B.V.

DT Journal

LA English

CC 2-10 (Mammalian Hormones)

AB Recently, a receptor for the **angiotensin** II(3-8) (Ang IV) hexapeptide, was discovered in the hippocampus, suggesting a possible role in learning. The present study utilized intracerebroventricularly (icv) infused scopolamine hydrobromide (scop) to disrupt spatial learning in the circular water maze, followed by the Ang IV analog norleucine1-Ang IV

(Nle1-Ang IV), to restore normal performance. Rats were icv pretreated with either scop or artificial cerebrospinal fluid (aCSF) followed by either icv injected Nle1-Ang IV or aCSF, and then behaviorally tested. During acquisition training, each animal's latency to locate the platform, path distance, speed, and efficiency ratios were measured. A probe trial was conducted on the final day of training and the time spent in the target quadrant and the number of crossings over the former location of the platform (annulus crossings) were observed The results indicate that those animals treated with scop followed by aCSF performed poorly during acquisition training as compared with controls. In contrast, those animals that received scop followed by Nle1-Ang IV attained equivalent latencies, distances, and efficiency ratios to find the platform as those achieved by controls. There were no observed differences in swimming speed, thus arguing against drug-induced motor impairment. During the probe trial, animals treated with scop followed by aCSF spent less time in the target quadrant and made fewer annulus crossings as compared to controls, while the scop, Nle1-Ang IV treated animals performed equivalently to controls. These results suggest that Nle1-Ang IV acts to counteract the disruption of spatial learning induced by scopolamine.

ST scopolamine learning impairment **angiotensin** IV analog

IT Learning
(spatial, disorder; **angiotensin** IV analog attenuation of scopolamine-induced spatial learning impairment in rats)

IT Learning
(spatial; **angiotensin** IV analog attenuation of scopolamine-induced spatial learning impairment in rats)

IT 114-49-8, Scopolamine hydrobromide
RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**angiotensin** IV analog attenuation of scopolamine-induced spatial learning impairment in rats)

IT **154272-72-7**, [Nle1,Ile3]-**Angiotensin** IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**angiotensin** IV analog attenuation of scopolamine-induced spatial learning impairment in rats)

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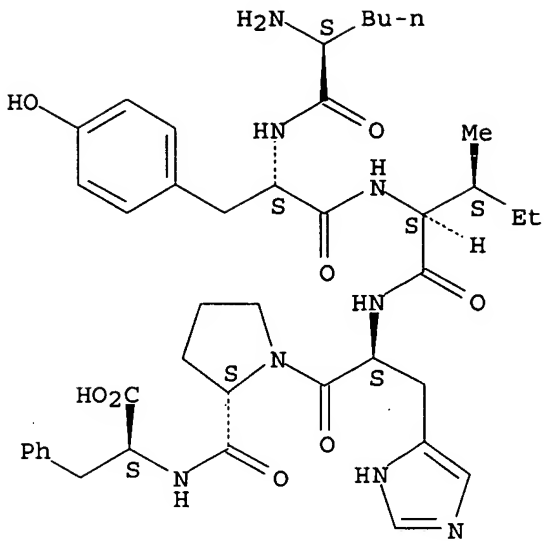
IT **154272-72-7**, [Nle1,Ile3]-**Angiotensin** IV
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**angiotensin** IV analog attenuation of scopolamine-induced spatial learning impairment in rats)

RN 154272-72-7 HCAPLUS
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:616841 HCAPLUS
DN 127:288555
ED Entered STN: 27 Sep 1997
TI The AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mechanically induced immediate-early gene expression in the isolated rabbit heart
AU Yang, Qinglin; Hanesworth, Jodie M.; Harding, Joseph W.; Slinker, Bryan K.
CS Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology, Washington State University, Pullman, WA, 99164-6520, USA
SO Regulatory Peptides (**1997**), 71(3), 175-183
CODEN: REPPDY; ISSN: 0167-0115
PB Elsevier
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB **Angiotensin** II (ANG II), acting principally at the AT1 receptor, modulates mech.-induced cardiac growth. The ANG II metabolite **Angiotensin** IV (ANG IV) has been shown to inhibit ANG II-induced mRNA and protein synthesis in chick cardiomyocytes. This effect did not involve the AT1 receptor, but was likely an action at the AT4 receptor. To determine if ANG IV also modulates a mech.-induced cardiac growth response, we studied the effects of two AT4 receptor ligands, [Nle1]-ANG IV and [divalinal]-ANG IV, on mech.-induced immediate-early gene expression (c-fos, egr-1, and c-jun) in the buffer perfused (30°), ejecting, isolated rabbit heart. Mech. load alone (high systolic pressure and high end-diastolic volume) induced approx. 23-, 49- and 5-fold increases in c-fos, egr-1 and c-jun mRNA (in comparison to control hearts). Perfusion with [Nle1]-ANG IV (10-10 mol/l) reduced the mech.-induced expression of c-fos and egr-1 by 42% and 48%, resp. Mech.-induced c-jun expression was not significantly reduced. Perfusion with [divalinal]-ANG IV (10-8 mol/l) had no effect on mech.-induced immediate-early gene expression. We conclude that AT4 receptor agonism influences mech. immediate-early gene expression, and propose the hypothesis that AT1 and AT4 receptors initiate opposing effects on mech.-induced immediate-early gene expression in the isolated rabbit left ventricle.
ST AT4 receptor immediate early gene expression; **angiotensin** IV

immediate early gene heart
IT Heart
(AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT **Angiotensin** receptors
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(AT4 receptor; AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Egr-1; AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-fos; AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-jun; AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT Gene
(expression; AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(immediate early; AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
IT 12676-15-2, **Angiotensin** IV **154272-72-7** 184866-76-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)
RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
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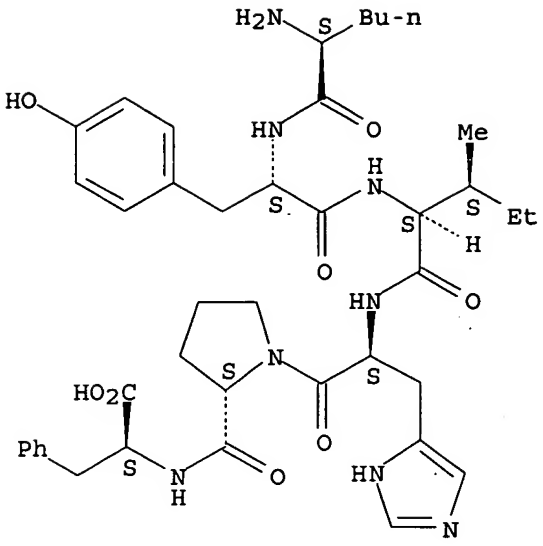
IT **154272-72-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(AT4 receptor agonist [Nle1]-**angiotensin** IV reduces mech. induced immediate-early gene expression in isolated rabbit heart)

RN 154272-72-7 HCAPLUS
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:384287 HCAPLUS
DN 127:1228
ED Entered STN: 20 Jun 1997
TI **Angiotensin** IV and analogs as regulators of fibrinolysis
IN Vaughan, Douglas E.; Harding, Joseph W.
PA Brigham and Women's Hospital, USA; Washington State University Research Foundation
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT **Patent**
LA English
IC ICM A61K038-00
ICS A61K038-04; A01N037-18; C07K007-06; C07K007-14
CC 2-10 (Mammalian Hormones)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9716201	A1	19970509	WO 1996-US13804	19960827 <--
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9668617	A1	19970522	AU 1996-68617	19960827 <--
PRAI	US 1995-550174	A	19951030	<--	
	WO 1996-US13804	W	19960827	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9716201	ICM	A61K038-00
	ICS	A61K038-04; A01N037-18; C07K007-06; C07K007-14
WO 9716201	ECLA	A61K038/08A; A61K038/55; C07K005/08A1; C07K005/08H1; C07K007/14; C07K016/26 <--

AB **Angiotensin** IV (VAL-TYR-ILE-HIS-PRO-PHE), a degradation product of **angiotensin** II previously thought to be inactive, interacts directly with endothelial cells to induce expression of PAI-1 and thereby to inhibit clot lysis attributable to endogenous t-PA. Moreover, **angiotensin** IV does not effect substantial physiol. changes (vasoconstriction, increased blood pressure, etc.) characteristic of

angiotensin II. Fibrinolysis is promoted by reducing the amount or the effect of **angiotensin** IV. Fibrinolysis is inhibited by providing enhanced **angiotensin** IV. Methods of screening candidates for antagonizing **angiotensin** IV are also disclosed.

ST **angiotensin** IV analog fibrinolysis regulator

IT Hemophilia
(A; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Hemophilia
(B; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Liver, disease
Myeloproliferative disorders
Neoplasm
Von Willebrand's disease
(**angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Fibrinolytics
(**angiotensin** IV and analogs as regulators of fibrinolysis)

IT Antibodies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**angiotensin** IV antibody or Fab fragment derived from the antibody as regulators of fibrinolysis)

IT Heart, disease
(cardiomyopathy; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Brain, disease
(cerebrovascular; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Anticoagulants
(circulating and inherited defects in natural coagulation inhibitors; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Fibrinogens
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(deficiency; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Platelet (blood)
Platelet (blood)
(disease; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Blood coagulation
(disorder; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Fibrinogens
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(dysfibrinogenemia; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT **Blood vessel**
(endothelium; **angiotensin** IV inhibits clot lysis attributable to t-PA by interacting with endothelial cells to induce expression of PAI-1 fibrinolysis)

IT Heart, disease
(failure, chronic; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT Heart, disease
(infarction; **angiotensin** IV and analogs as promoters or

inhibitors of fibrinolysis in a variety of medical conditions)
IT Neoplasm
(metastasis; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Contraceptives
(oral, treatment; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Hemophilia
(parahemophilia; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Prosthetic materials and Prosthetics
Transplant and Transplantation
(post-surgical maintenance; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Fibrinolysis
(promoters; **angiotensin** IV and analogs as regulators of fibrinolysis)
IT Platelet (blood)
(thrombocytopenia; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Embolism
(thromboembolism; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Injury
(trauma; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT Surgery
(undesired clotting; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)
IT 190140-89-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**angiotensin** IV and analogs as regulators of fibrinolysis)
IT 12676-15-2, **Angiotensin** IV 12676-15-2D, **Angiotensin** IV, analogs 151896-03-6 160039-53-2 187465-57-2 187465-62-9 187465-63-0 190140-83-1 190140-84-2 190140-85-3 190140-86-4 190140-87-5 190140-88-6 190140-90-0 **190140-91-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**angiotensin** IV and analogs as regulators of fibrinolysis)
IT 79069-51-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(**angiotensin** IV and analogs as regulators of fibrinolysis)
IT 139639-23-9, Tissue plasminogen activator
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**angiotensin** IV inhibits clot lysis attributable to t-PA by interacting with endothelial cells to induce expression of PAI-1 fibrinolysis)
IT 140208-23-7
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(**angiotensin** IV inhibits clot lysis attributable to t-PA by interacting with endothelial cells to induce expression of PAI-1 fibrinolysis)
IT 105913-11-9, Plasminogen activator
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological

study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(defective release or diminished venous content; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT 9001-25-6, Blood coagulation factor VII 9001-26-7, Prothrombin 9001-29-0, Stuart-Prower factor 9001-30-3, Hageman factor 9013-55-2, Plasma Thromboplastin antecedent 81604-65-1, Heparin cofactor II
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(deficiency; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT 9001-90-5, Plasmin
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(dysplasminogenemia; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT 105844-41-5, PAI
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(excessive release; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT 462-10-2
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(homocystinuria; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

IT 9054-63-1, Aminopeptidase M 9074-83-3, Aminopeptidase A
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(inhibitors; use as promoters of fibrinolysis in a variety of medical conditions)

IT 9015-68-3, L-Asparaginase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment; **angiotensin** IV and analogs as promoters or inhibitors of fibrinolysis in a variety of medical conditions)

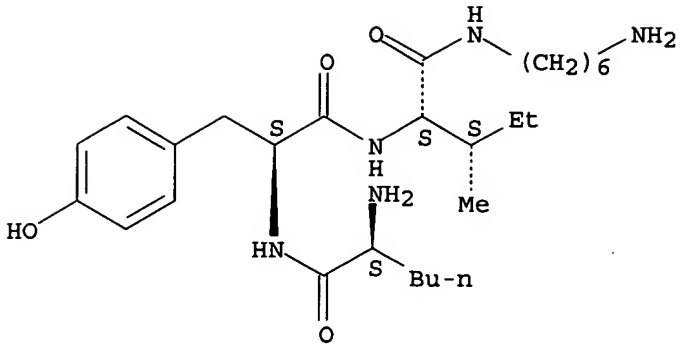
IT 67655-94-1, Amastatin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use as promoter of fibrinolysis in a variety of medical conditions)

IT 11128-99-7, **Angiotensin** II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(use of compds. that inhibit the conversion of **angiotensin** II to **angiotensin** IV as promoters of fibrinolysis)

IT **190140-91-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**angiotensin** IV and analogs as regulators of fibrinolysis)

RN 190140-91-1 HCAPLUS
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl-N-(6-aminohexyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:204190 HCAPLUS
DN 126:186379
ED Entered STN: 28 Mar 1997
TI Preparation of peptide derivatives as **angiotensin** IV receptor agonists
IN Kobori, Takeo; Goda, Kenichi; Sugimoto, Kikuo; Ota, Tomomi; Tomisawa, Kazuyuki
PA Sagami Chemical Research Center, Japan; Taisho Pharmaceutical Co., Ltd.
SO PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DT **Patent**
LA Japanese
IC ICM C07K005-062
ICS C07K005-083; C07K005-087; C07K005-09; C07K005-097; C07K005-023; A61K038-05; A61K038-06
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9703093	A1	19970130	WO 1996-JP1836	19960703 <--
	W: AU, CA, CN, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2226303	AA	19970130	CA 1996-2226303	19960703 <--
	AU 9663179	A1	19970210	AU 1996-63179	19960703 <--
	EP 838471	A1	19980429	EP 1996-922208	19960703 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	CN 1192746	A	19980909	CN 1996-196131	19960703 <--
PRAI	JP 1995-171251	A	19950707 <--		
	JP 1995-258635	A	19951005 <--		
	WO 1996-JP1836	W	19960703 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9703093	ICM	C07K005-062
	ICS	C07K005-083; C07K005-087; C07K005-09; C07K005-097; C07K005-023; A61K038-05; A61K038-06
WO 9703093	ECLA	C07K005/02A; C07K005/06A1; C07K005/08A2; C07K005/08A1; C07K005/08B; C07K005/08H <--
EP 838471	ECLA	C07K005/02A <--

OS MARPAT 126:186379
AB The title compds. R1NH(CH2)nCHR2CONHCHR3CONHCR4R5R6 [R1 = H, alkyl; R2 =

H, (un)substituted alkyl, etc.; or R1R2 = (un)substituted alkylene; R3 = (un)substituted alkyl, etc.; R4 = H, (un)substituted alkyl, etc.; R5 = H, (un)substituted alkyl, etc.; R6 = H, (un)substituted alkyl, etc; n = 0 - 3] are prepared The title compds. function as **angiotensin** IV receptor agonists even in a low concentration and so are useful as a remedy for various diseases wherein **angiotensin** IV participates. In a test for affinity for the **angiotensin** IV receptor, L-valyl-L-tyrosyl-N-(diphenylmethyl)-L-isoleucinamide in vitro showed IC50 of 38.3 nM.

ST **angiotensin** receptor agonist prepn peptide

IT Ischemia
(preparation of peptide derivs. as **angiotensin** IV receptor agonists with effect on ischemia)

IT Receptors
RL: BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study)
(preparation of peptide derivs. with effect on **angiotensin** IV receptor)

IT 187677-44-7P 187677-45-8P 187677-46-9P 187677-47-0P 187677-48-1P
187677-49-2P 187677-50-5P 187677-51-6P 187677-52-7P 187677-53-8P
187677-54-9P 187677-55-0P 187677-56-1P 187677-57-2P 187677-58-3P
187677-59-4P 187677-60-7P 187677-61-8P **187677-62-9P**
187677-63-0P 187677-64-1P 187677-65-2P 187677-66-3P 187677-67-4P
187677-68-5P 187677-69-6P 187677-70-9P 187677-71-0P
187677-72-1P 187677-73-2P 187677-74-3P 187677-75-4P 187677-76-5P
187677-77-6P 187677-78-7P **187677-79-8P** 187677-80-1P
187677-81-2P 187677-82-3P 187677-83-4P 187677-84-5P 187677-85-6P
187677-86-7P 187677-87-8P 187677-88-9P 187677-89-0P 187677-90-3P
187677-91-4P 187677-92-5P 187677-93-6P 187677-94-7P 187677-95-8P
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187678-01-9P 187678-02-0P 187678-03-1P 187678-04-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists)

IT 51-65-0, 4-Fluoro-DL-phenylalanine 59-92-7, 3,4-Dihydroxy-L-phenylalanine, reactions 60-32-2, 6-Aminohexanoic acid 64-04-0, 2-Phenylethylamine 77-78-1, Dimethyl sulfate 91-00-9, Diphenylmethylamine 100-46-9, Benzylamine, reactions 100-51-6, Benzyl alcohol, reactions 104-84-7, 4-Methylbenzylamine 124-68-5, 2-Amino-2-methyl-1-propanol 141-43-5, reactions 156-41-2, 2-(4-Chlorophenyl)ethylamine 622-33-3, O-Benzylhydroxylamine 712-76-5, [1,1'-Biphenyl]-4-methanamine 862-26-0 949-99-5, 4-Nitro-L-phenylalanine 1161-13-3, N-(Benzyloxycarbonyl)-L-phenylalanine 1164-16-5, N-(Benzyloxycarbonyl)-L-tyrosine 1449-46-3, Benzyltriphenylphosphonium bromide 1530-37-6, 4-Methylbenzyltriphenylphosphonium chloride 2018-66-8, N-(Benzyloxycarbonyl)-L-leucine 2627-86-3, (S)-1-Phenylethylamine 3160-59-6, N-(Benzyloxycarbonyl)-L-isoleucine 3182-95-4 3392-08-3 3392-10-7 3392-11-8 3392-12-9 3417-91-2, Tyrosine methyl ester hydrochloride 3674-06-4 3845-64-5 3886-69-9 3963-62-0, 2,2-Diphenylethylamine 4083-57-2, 3-Amino-2,4-dimethylpentane 4427-29-6, O-2-Propylhydroxylamine 6404-28-0, N-(tert-Butoxycarbonyl)-L-norleucine 7533-40-6 13139-16-7, N-(tert-Butoxycarbonyl)-L-isoleucine 13650-73-2 13734-41-3, N-(tert-Butoxycarbonyl)-L-valine 14173-39-8, 4-Chloro-L-phenylalanine 16652-75-8 16751-59-0, 4-Aminoheptane 16947-82-3 18598-74-8, Isoleucine methyl ester hydrochloride 20866-56-2 20898-44-6 24424-99-5, tert-Butyl dicarbonate 24629-25-2 32703-87-0 36360-61-9 42918-86-5 53587-11-4 59408-74-1

87176-71-4 90970-61-9 106946-74-1 108233-37-0 129253-02-7
139519-25-8 187679-10-3 187679-20-5 187679-25-0 187679-26-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists)

IT 5514-99-8P 30033-24-0P 33305-77-0P 33905-02-1P 37941-60-9P
60668-72-6P 64699-09-8P 75957-53-8P 77456-95-2P 87694-55-1P
120369-37-1P 123709-00-2P 148534-41-2P 149603-83-8P 154128-82-2P
156924-92-4P 157325-01-4P 157325-02-5P 173899-73-5P 176844-79-4P
176844-89-6P 187678-05-3P 187678-06-4P 187678-07-5P 187678-08-6P
187678-09-7P 187678-10-0P 187678-11-1P 187678-12-2P 187678-13-3P
187678-14-4P 187678-15-5P 187678-16-6P 187678-17-7P 187678-18-8P
187678-19-9P 187678-20-2P 187678-21-3P 187678-22-4P 187678-23-5P
187678-24-6P 187678-25-7P 187678-26-8P 187678-27-9P 187678-28-0P
187678-29-1P 187678-30-4P 187678-31-5P 187678-32-6P 187678-33-7P
187678-34-8P **187678-36-0P** 187678-38-2P 187678-40-6P
187678-42-8P 187678-44-0P 187678-46-2P 187678-48-4P 187678-50-8P
187678-52-0P 187678-54-2P 187678-56-4P 187678-58-6P 187678-60-0P
187678-62-2P 187678-63-3P 187678-64-4P 187678-65-5P 187678-66-6P
187678-67-7P **187678-68-8P** 187678-69-9P 187678-70-2P
187678-71-3P 187678-72-4P 187678-73-5P 187678-74-6P 187678-75-7P
187678-76-8P 187678-77-9P 187678-79-1P 187678-81-5P 187678-83-7P
187678-86-0P 187678-89-3P 187678-93-9P 187678-95-1P 187678-97-3P
187679-01-2P 187679-03-4P 187679-06-7P 187679-08-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists)

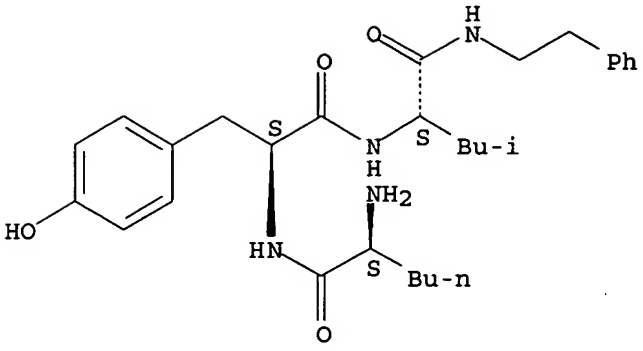
IT 12676-15-2, **Angiotensin** IV
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists with effect on ischemia)

IT 187679-27-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists with effect on ischemia)

IT **187677-62-9P 187677-68-5P 187677-79-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists)

RN 187677-62-9 HCAPLUS
CN L-Leucinamide, L-norleucyl-L-tyrosyl-N-(2-phenylethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

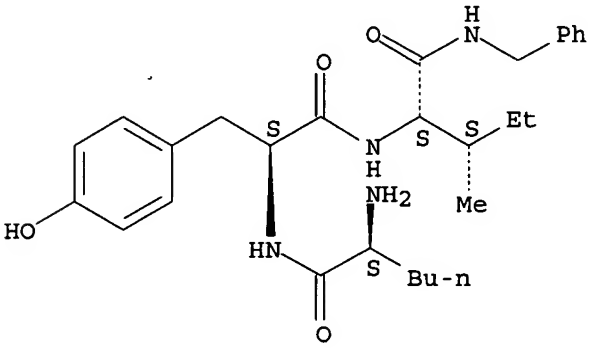
Absolute stereochemistry.



● HCl

RN 187677-68-5 HCAPLUS
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl-N-(phenylmethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

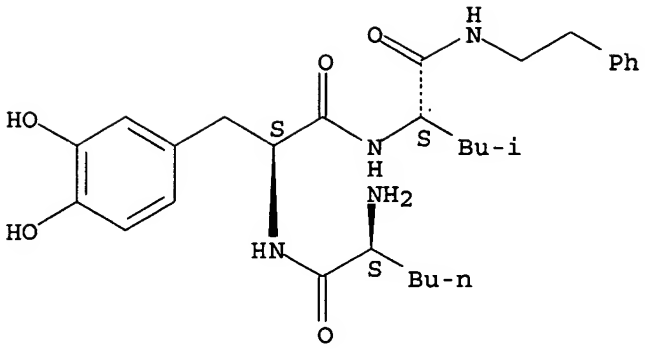
Absolute stereochemistry.



● HCl

RN 187677-79-8 HCAPLUS
CN L-Leucinamide, L-norleucyl-3-hydroxy-L-tyrosyl-N-(2-phenylethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

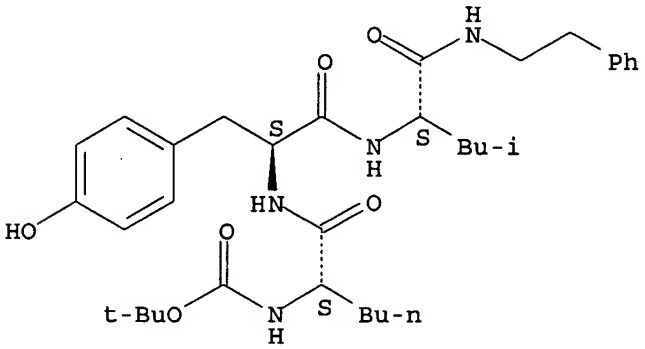
Absolute stereochemistry.



● HCl

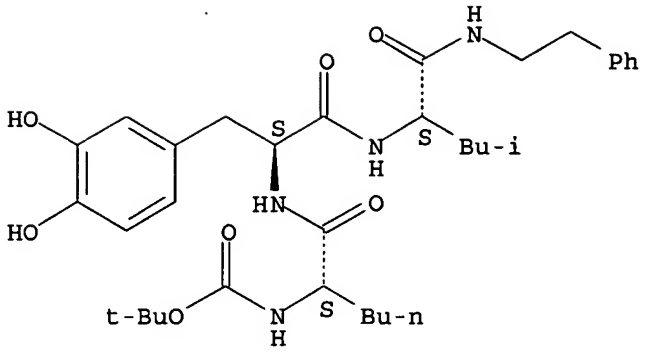
IT **187678-36-0P 187678-68-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of peptide derivs. as **angiotensin** IV receptor agonists)
RN 187678-36-0 HCAPLUS
CN L-Leucinamide, N-[(1,1-dimethylethoxy)carbonyl]-L-norleucyl-L-tyrosyl-N-(2-phenylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 187678-68-8 HCAPLUS
CN L-Leucinamide, N-[(1,1-dimethylethoxy)carbonyl]-L-norleucyl-3-hydroxy-L-tyrosyl-N-(2-phenylethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:347719 HCAPLUS
DN 125:77271
ED Entered STN: 15 Jun 1996
TI Pharmacological characterization of a specific binding site for **angiotensin** IV in cultured porcine aortic endothelial cells
AU Riva, Laurence; Galzin, Anne-Marie
CS Department of Cardiovascular Research, Synthelabo Recherche (LERS), 31 Avenue Paul-Vaillant Couturier, BP 110, 92225, Bagneux, Fr.
SO European Journal of Pharmacology (**1996**), 305(1-3), 193-199
CODEN: EJPHAZ; ISSN: 0014-2999
PB Elsevier
DT Journal
LA English
CC 2-10 (Mammalian Hormones)
AB This study demonstrated the existence of a specific binding site for **angiotensin** IV in porcine aortic endothelial cells. Non-equilibrium kinetic analyses at 37° allowed the calcn. of a kinetic Kd of 0.44 nM. Pseudo-equilibrium saturation binding studies at 37° for 90 min indicated the presence of a single high-affinity site (Kd = 3.87 nM), saturable and abundant (Bmax = 9.64 pmol/mg protein). Competitive binding studies demonstrated the following rank order of effectiveness: **angiotensin** IV>**angiotensin** III>**angiotensin** II> **angiotensin** I>**angiotensin** II-(1-7), while losartan, PD 123177 or CGP 42112A were inactive at 100 μM. This binding site is, therefore, distinct from **angiotensin** II receptors, AT1 and AT2. Addition of the divalent cations Mg2+, Mn2+ or Ca2+ to the incubation buffer resulted in 90-95% inhibition of the [125I]**angiotensin** IV-specific binding to porcine aortic endothelial cells. Furthermore, the chelator, EGTA, at 5 mM increased the number of binding sites (Bmax = 17.8 pmol/mg protein), with no change in affinity (Kd = 5.7 nM). Exposure of porcine aortic endothelial cell membranes to the non-hydrolyzable GTP analog, GTPγS, had no effect on [125I] **angiotensin** IV binding. The presence of a high concentration of binding sites for **angiotensin** IV in porcine aortic endothelial cells suggests that this peptide may play an important role in the modulation of the cardiovascular system.
ST **angiotensin** IV receptor aorta endothelium
IT **Artery**
(aorta, endothelium, pharmacol. characterization of specific binding site for **angiotensin** IV in cultured porcine aortic endothelial cells)
IT Cations

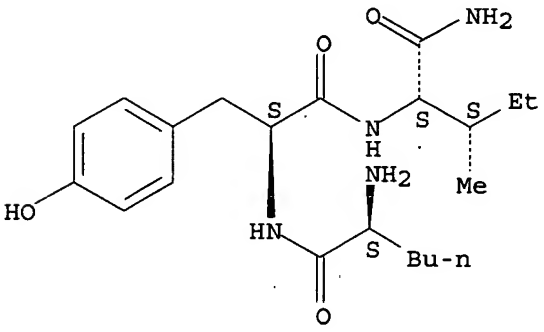
(divalent, pharmacol. characterization of specific binding site for **angiotensin** IV in cultured porcine aortic endothelial cells)

IT 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-70-2, Calcium, biological studies 9041-90-1, **Angiotensin** I 9088-01-1 11128-99-7, **Angiotensin**-II 12676-15-2, **Angiotensin** IV 12687-51-3, **Angiotensin** III 39386-80-6, **Angiotensin** II-(1-7) **154272-76-1**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacol. characterization of specific binding site for **angiotensin** IV in cultured porcine aortic endothelial cells)

IT **154272-76-1**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(pharmacol. characterization of specific binding site for **angiotensin** IV in cultured porcine aortic endothelial cells)

RN 154272-76-1 HCAPLUS
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:263965 HCAPLUS
DN 122:46717
ED Entered STN: 24 Dec 1994
TI AT4 receptor structure-binding relationship: N-terminal-modified **angiotensin** IV analogs
AU Sardinia, M. F.; Hanesworth, J. M.; Krishnan, F.; Harding, J. W.
CS Dep. Vet. Comparative Anatomy, Pharmacol., Physiol., Washington State Univ., Pullman, WA, 99164-6520, USA
SO Peptides (Tarrytown, New York) (**1994**), 15(8), 1399-406
CODEN: PPTDD5; ISSN: 0196-9781
PB Elsevier
DT Journal
LA English
CC 2-2 (Mammalian Hormones)
AB The effect of structural changes in the N-terminal amino acid of **angiotensin** IV (AIV), with respect to AT4 receptor binding, was examined by competition with [125I]AIV in bovine adrenal membranes. Analogs with modifications of the first residue α-amino group possessed lower affinities than the primary amine-containing parent compound Peptides with a residue 1 α-carbon in the D conformation exhibited poor affinity for the AT4 receptor. Modifications of the residue 1 R-group demonstrate that a straight chain aliphatic moiety containing 4 carbons is optimal for receptor-ligand binding, as evidenced by the extremely high

affinity of [Nle1]AIV (Ki = 3.59 pM). Replacement of the 1-2 peptide bond of AIV with the methylene bond isostere ψ (CH2-NH), increased the Ki approx. 5-fold, indicating that the peptide bond may be replaced while maintaining relatively high-affinity receptor binding.

ST AT4 receptor **angiotensin** structure activity

IT Receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**angiotensin** IV AT4, **angiotensin** IV AT4 receptor structure-binding relationships)

IT Molecular structure-biological activity relationship
(receptor-binding, **angiotensin** IV AT4 receptor structure-binding relationships)

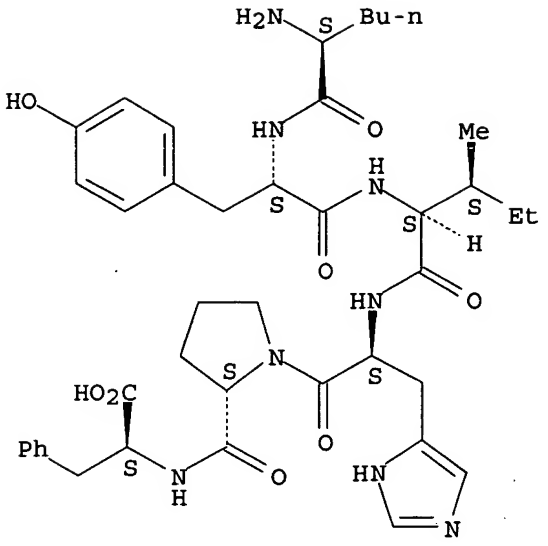
IT 23025-68-5, **Angiotensin** IV 51988-76-2, N-Acetyl-[Ile3]-**angiotensin** IV 151896-03-6, [D-Val1,Ile3]-**angiotensin** IV **154272-72-7**, [Nle1,Ile3]-**angiotensin** IV 154272-73-8, [Nva1,Ile3]-**angiotensin** IV 154272-74-9, [Orn1,Ile3]-**angiotensin** IV 154295-26-8, [Lys1,Ile3]-**angiotensin** IV 160039-45-2, [Ile1,Ile3]-**angiotensin** IV 160039-46-3 160039-47-4, [2-Aminoheptanoyl1,Ile3]-**angiotensin** IV 160039-48-5, [2,3-Diaminopropanoyl1,Ile3]-**angiotensin** IV 160039-49-6, [2,4-Diaminobutanoyl1,Ile3]-**angiotensin** IV 160039-50-9, [Asp1,Ile3]-**angiotensin** IV 160039-51-0, [Glu1,Ile3]-**angiotensin** IV 160039-52-1, [Cys1,Ile3]-**angiotensin** IV 160039-53-2, [Ser1,Ile3]-**angiotensin** IV 160039-54-3, [Arg1,Ile3]-**angiotensin** IV 160039-55-4, [Phe1,Ile3]-**angiotensin** IV 160039-56-5, [p-Amino-Phe1,Ile3]-**angiotensin** IV 160039-57-6, [N-δ-Isobutanoyl-Orn1,Ile3]-**angiotensin** IV 160039-58-7, [N-δ-Propanoyl-Orn1,Ile3]-**angiotensin** IV 160039-59-8, [N-δ-Benzoyl-Orn1,Ile3]-**angiotensin** IV 160039-60-1, [N-δ-Trimethylacetyl-Orn1,Ile3]-**angiotensin** IV 160039-61-2, N-Methyl-[Ile3]-**angiotensin** IV 160039-62-3, [N-Methyl-Ile1,Ile3]-**angiotensin** IV 160039-63-4, [Pro1,Ile3]-**angiotensin** IV 160039-64-5, [Homopro1,Ile3]-**angiotensin** IV 160039-65-6, [6-Aminohexanoyl1,Ile3]-**angiotensin** IV 160039-66-7, [Hexanoyl1,Ile3]-**angiotensin** IV 160039-67-8, [GABA1,Ile3]-**angiotensin** IV **160039-68-9**, [D-Nle1,Ile3]-**angiotensin** IV 160039-69-0 160039-70-3 160039-71-4 160039-72-5
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(**angiotensin** IV AT4 receptor structure-binding relationships)

IT **154272-72-7**, [Nle1,Ile3]-**angiotensin** IV **160039-68-9**, [D-Nle1,Ile3]-**angiotensin** IV
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(**angiotensin** IV AT4 receptor structure-binding relationships)

RN 154272-72-7 HCAPLUS

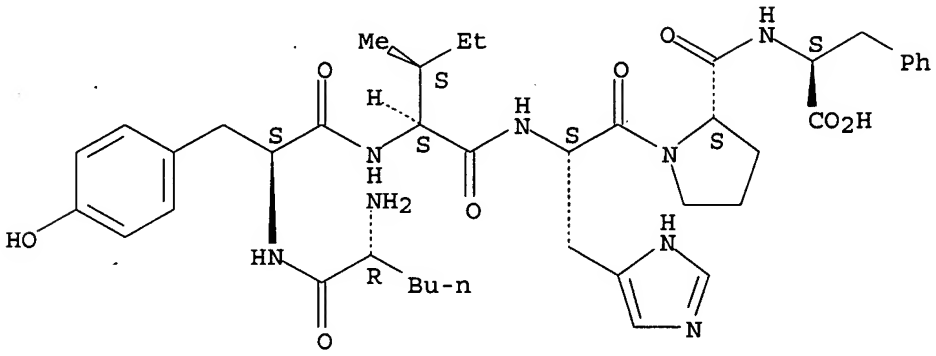
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 160039-68-9 HCAPLUS
CN Angiotensin II, 1-de-L-aspartic acid-2-de-L-arginine-3-D-norleucine-5-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L40 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:237098 HCAPLUS
DN 120:237098
ED Entered STN: 14 May 1994
TI A receptor for the **angiotensin** processing product **angiotensin** IV
IN Harding, Joseph W.; Wright, John W.
PA Washington State University Research Foundation, USA
SO PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DT **Patent**
LA English
IC ICM C07K013-00
ICS C07K003-12; C07K015-28
CC 2-10 (Mammalian Hormones)
Section cross-reference(s): 1

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9400492	A1	19940106	WO 1993-US6038	19930624 <--
	W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9346492	A1	19940124	AU 1993-46492	19930624 <--
	ZA 9304536	A	19940203	ZA 1993-4536	19930624 <--
	EP 647239	A1	19950412	EP 1993-916733	19930624 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	US 5854388	A	19981229	US 1994-360784	19941222 <--
PRAI	US 1992-906396	A2	19920624 <--		
	WO 1993-US6038	A	19930624 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9400492	ICM	C07K013-00
	ICS	C07K003-12; C07K015-28
US 5854388	NCL	530/329.000; 436/548.000; 514/017.000; 514/018.000; 530/330.000; 530/331.000; 530/387.200; 530/387.900; 530/388.240
	ECLA	C07K005/10A1B; C07K007/14; C07K014/72 <--

OS MARPAT 120:237098

AB A receptor specific for **angiotensin** 4 (AT4), the N-terminal hexapeptide of **Angiotensin** II (VYIHPF) is described. AIV binds saturably, reversibly, specifically, and with high affinity to membrane AT4 receptors in a variety of tissues, including heart, lung, kidney, aorta, brain, liver, and uterus, from many animal species. The AT4 receptor is pharmacol. distinct from classic **angiotensin** receptors (AT1 or AT2). The system employs AIV or C-terminally truncated or extended AIV-like peptides (e.g. VYIHPFX) as the signaling agent, and the AT4 plasma membrane receptor as the detection mechanism. The **angiotensin** AT4 receptor and receptor fragments (including the receptor binding site domain) can bind a VYIHPF **angiotensin** AIV N-terminal peptide but not an **angiotensin** AII or AIII N-terminal peptide, i.e., DRVYIHPF or RVYIHPF. Methods for isolating **angiotensin** AT4 receptor and AIV **angiotensinase**, identifying **angiotensin** AIV agonists and antagonists, and constructing diagnostic assays to specifically measure AIV and AI-specific **angiotensinase** in biol. fluids are also described. Specificity of binding of the receptor (bovine adrenal cortex) and ligand was demonstrated by competition expts. and competition expts. were also used to identify functionally important residues. The Kd of the complex was 5.06±0.57+10-10 M with a Bmax of 87.9±9.7 fmol ligand/mg protein and a Hill coefficient of 0.995±0.039. The receptor has properties consistent with those of a member of the tyrosine kinase of growth factor receptors.

ST **angiotensin** IV receptor AT4

IT Adrenal gland, composition
Adrenal medulla
Brain, composition
Liver, composition
Lung, composition
Uterus, composition
(**angiotensin** IV receptor AT4 receptor in)

IT Kidney, metabolism
(blood flow in, stimulation of, **angiotensin** IV receptor

ligands for)
IT Heart
(cardiocyte growth in, stimulation of, **angiotensin** IV receptor ligands for)
IT Immunoassay
(for **angiotensin** IV)
IT Molecular structure-biological activity relationship
(for binding of **angiotensin** to AT4 receptor)
IT Catecholamines
RL: BIOL (Biological study)
(release from adrenal medullary cells of, modulation of, **angiotensin** IV receptor ligands for)
IT Learning
Memory, biological
(stimulation of, **angiotensin** IV receptor ligands for)
IT Antibodies
RL: BIOL (Biological study)
(to **angiotensin** IV or cognate receptor)
IT Receptors
RL: BIOL (Biological study)
(**angiotensin** IV AT4, identification and characterization of, physiol. role of, as member of tyrosine kinase family)
IT **Artery, composition**
(aorta, **angiotensin** IV receptor AT4 receptor in)
IT Brain, composition
(cerebellum, **angiotensin** IV receptor AT4 receptor in)
IT **Blood vessel**
(endothelium, proliferation of, induction of, **angiotensin** IV receptor ligands for)
IT Brain, composition
(habenula, **angiotensin** IV receptor AT4 receptor in)
IT Brain, composition
(hippocampus, **angiotensin** IV receptor AT4 receptor in)
IT Brain, composition
(prefrontal cortex, **angiotensin** IV receptor AT4 receptor in)
IT Muscle, metabolism
(smooth, proliferation in vascular tissue of, inhibition of, **angiotensin** IV receptor ligands for)
IT Brain, composition
(thalamus, **angiotensin** IV receptor AT4 receptor in)
IT 52-39-1, Aldosterone
RL: BIOL (Biological study)
(**angiotensin** II-mediated release of, inhibition of, **angiotensin** IV receptor ligands for)
IT 60668-73-7 122483-84-5 151341-79-6 154272-69-2 154272-70-5
154272-71-6 **154272-72-7** 154272-73-8 154272-74-9
154295-26-8
RL: BIOL (Biological study)
(**angiotensin** IV receptor ligands containing)
IT 23025-68-5D, **Angiotensin** IV, analogs
RL: BIOL (Biological study)
(as receptor agonists and antagonists)
IT 37827-06-8 51833-69-3 51833-78-4 52530-60-6 59817-04-8
75679-18-4 122483-84-5 124750-99-8, DuP753 125728-60-1
127060-75-7, CGP42112A 151896-03-6 151896-04-7 151896-05-8
151896-06-9 151896-07-0 151896-08-1 151896-09-2 151896-10-5
151896-11-6 151896-12-7 151923-88-5 154272-71-6 154272-75-0
154272-76-1 **154272-77-2** 154272-78-3 154272-79-4
154295-27-9 154295-28-0
RL: BIOL (Biological study)

(binding to **angiotensin** IV receptor of, structural requirements for receptor binding in relation to)

IT 11128-99-7, **Angiotensin** II 12687-51-3, **Angiotensin** III
RL: BIOL (Biological study)
(inhibition of actions induced by, **angiotensin** IV receptor ligands for)

IT 90880-94-7P, Endothelium-derived relaxing factor
RL: PREP (Preparation)
(manufacture in endothelial cells of, stimulation of, **angiotensin** IV receptor ligands for)

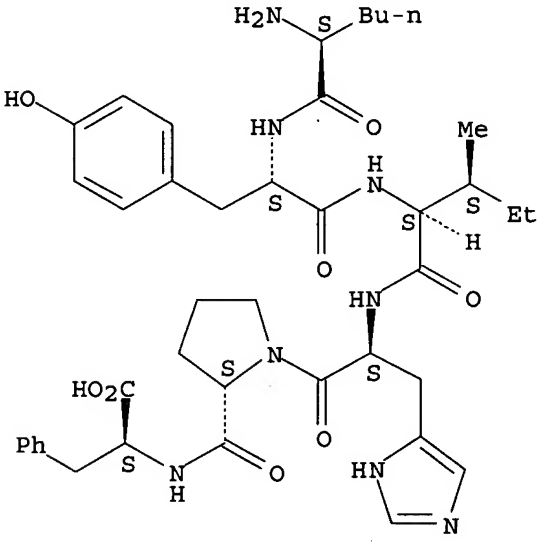
IT 23025-68-5, **Angiotensin** IV
RL: BIOL (Biological study)
(receptor for, identification and characterization of, physiol. role of)

IT 23025-68-5
RL: BIOL (Biological study)
(receptor for, identification and characterization of, physiol. role of, derivs. as receptor ligands in relation to)

IT **154272-72-7**
RL: BIOL (Biological study)
(**angiotensin** IV receptor ligands containing)

RN 154272-72-7 HCAPLUS
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

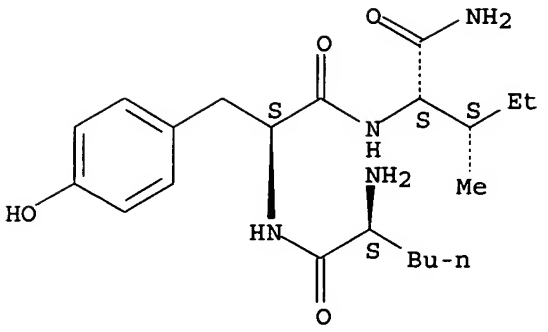
Absolute stereochemistry.



IT **154272-76-1 154272-77-2**
RL: BIOL (Biological study)
(binding to **angiotensin** IV receptor of, structural requirements for receptor binding in relation to)

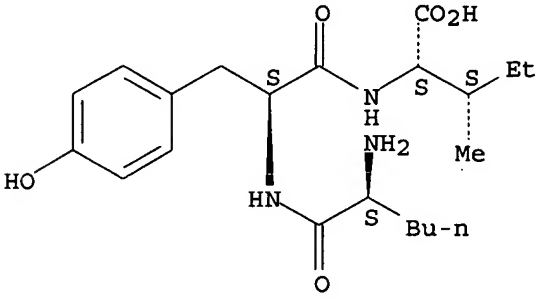
RN 154272-76-1 HCAPLUS
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 154272-77-2 HCAPLUS
CN L-Isoleucine, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005
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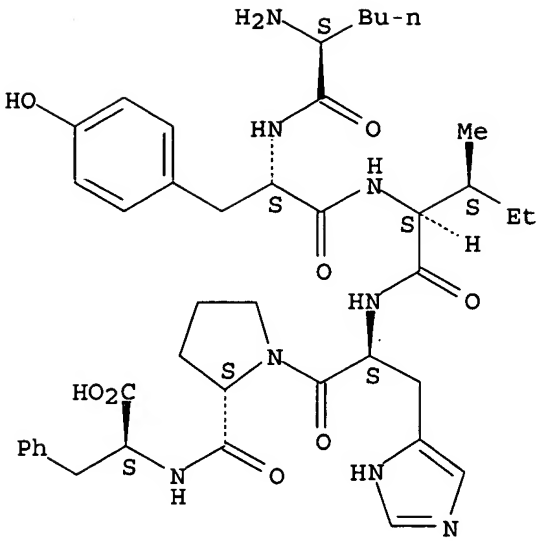
=> => d l47 bib abs hitstr tot

L47 ANSWER 1 OF 2 USPATFULL on STN
AN 2000:15472 USPATFULL
TI Methods of identifying agonists or antagonists of angiotensin IV
IN Harding, Joseph W., Pullman, WA, United States
Wright, John W., Pullman, WA, United States
PA Washington State University Research Foundation, Pullman, WA, United States (U.S. corporation)
PI US 6022696 20000208
AI US 1998-54308 19980402 (9)
RLI Division of Ser. No. US 360784
DT Utility
FS Granted
EXNAM Primary Examiner: Mertz, Prema; Assistant Examiner: Hamud, Fozia
LREP Christensen O'Connor Johnson & Kindness PLLC
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 28 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 4234
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A unique and novel angiotensin AT4 receptor and AIV ligand system for binding a small N-terminal hexapeptide fragment of Angiotensin II (referred to as AIV, with amino acid sequence Val.sub.1 -Tyr.sub.2 -Ile.sub.3 -His.sub.4 -Pro.sub.5 -Phe.sub.6 ; SEQ. ID. NO. 1) is disclosed. AIV ligand binds saturably, reversibly, specifically, and with high affinity to membrane AT4 receptors in a variety of tissues, including heart, lung, kidney, aorta, brain, liver, and uterus, from many animal species. The AT4 receptor is pharmacologically distinct from classic angiotensin receptors (AT1 or AT2). The system employs AIV or C-terminally truncated or extended AIV-like peptides (e.g., VYIHPFX; SEQ. ID. NO. 8) as the signaling agent, and the AT4 plasma membrane receptor as the detection mechanism. The angiotensin AT4 receptor and receptor fragments (including the receptor binding site domain) are capable of binding a VYIHPF (SEQ. ID. NO. 1) angiotensin AIV N-terminal peptide but not an angiotensin AII or AIII N-terminal peptide, i.e., DRVYIHPF (SEQ. ID. NO. 2) or RVYIHPF (SEQ. ID. NO. 3), respectively. Also disclosed are processes for isolating angiotensin AT4 receptor and AIV angioteninase, identifying angiotensin AIV agonists and antagonists, and constructing diagnostic assays to specifically measure AIV and AI-specific angiotensinase in biological fluids.

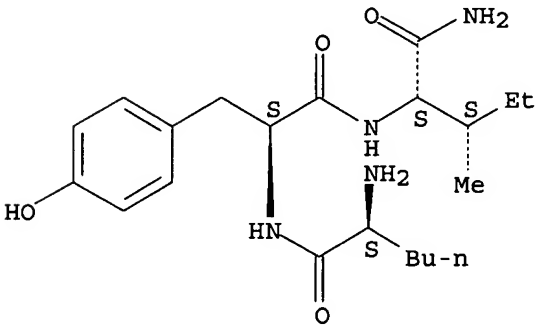
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **154272-72-7 154272-76-1 154272-77-2**
(methods of identifying agonists or antagonists of angiotensin IV)
RN 154272-72-7 USPATFULL
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



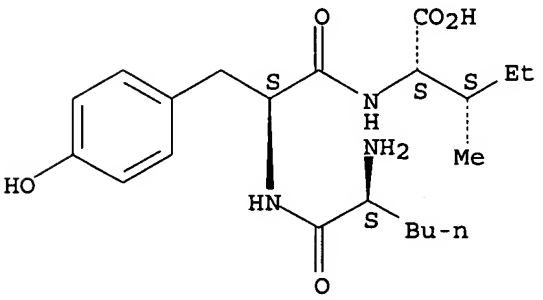
RN 154272-76-1 USPATFULL
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 154272-77-2 USPATFULL
CN L-Isoleucine, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

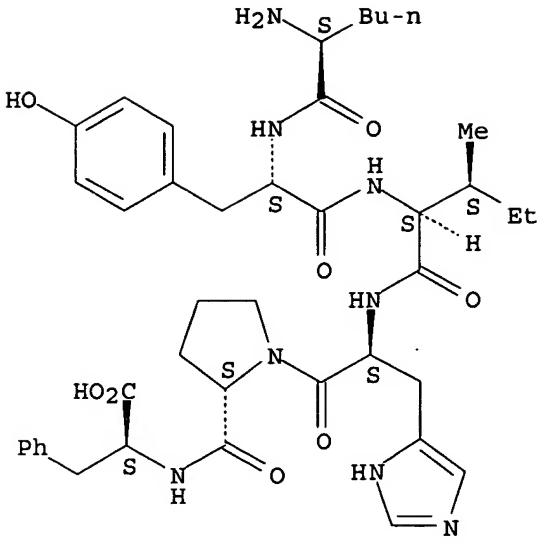
Absolute stereochemistry.



L47 ANSWER 2 OF 2 USPATFULL on STN
AN 1998:162647 USPATFULL
TI Angiotensin IV peptides and receptor
IN Harding, Joseph W., Pullman, WA, United States
Wright, John W., Pullman, WA, United States
PA Washington State University Research Foundation, Pullman, WA, United States (U.S. corporation)
PI US 5854388 19981229
WO 9400492 19940106
AI US 1994-360784 19941222 (8)
WO 1993-US6038 19930624
19941222 PCT 371 date
19941222 PCT 102(e) date
DT Utility
FS Granted
EXNAM Primary Examiner: Robinson, Douglas W.; Assistant Examiner: Harle, Jennifer
LREP Christensen O'Connor Johnson & Kindness PLLC
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 28 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 4073
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A unique and novel angiotensin AT4 receptor and AIV ligand system for binding a small N-terminal hexapeptide fragment of Angiotensin. II (referred to as AIV, with amino acid sequence Val.sub.1 -Tyr.sub.2 -Ile.sub.3 -His.sub.4 -Pro.sub.5 -Phe.sub.6 ; SEQ. ID. NO. 1) is disclosed. AIV ligand binds saturably, reversibly, specifically, and with high affinity to membrane AT4 receptors in a variety of tissues, including heart, lung, kidney, aorta, brain, liver, and uterus, from many animal species. The AT4 receptor is pharmacologically distinct from classic angiotensin receptors (AT1 or AT2). The system employs AIV or C-terminally truncated or extended AIV-like peptides (e.g., VYIHPFX; SEQ. ID. NO. 8) as the signaling agent, and the AT4 plasma membrane receptor as the detection mechanism. The angiotensin AT4 receptor and receptor fragments (including the receptor binding site domain) are capable of binding a VYIHPF (SEQ. ID. NO. 1) angiotensin AIV N-terminal peptide but not an angiotensin AII or AIII N-terminal peptide, i.e., DRVYIHPF (SEQ. ID. NO. 2) or RVYIHPF (SEQ. ID. NO. 3), respectively. Also disclosed are processes for isolating angiotensin AT4 receptor and AIV angioteninase, identifying angiotensin AIV agonists and antagonists, and constructing diagnostic assays to specifically measure AIV and AI-specific angiotensinase in biological fluids.

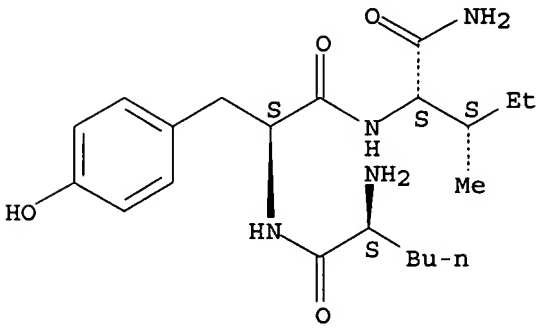
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **154272-72-7**
(angiotensin IV receptor ligands containing)
RN 154272-72-7 USPATFULL
CN Angiotensin IV, 1-L-norleucine-3-L-isoleucine- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



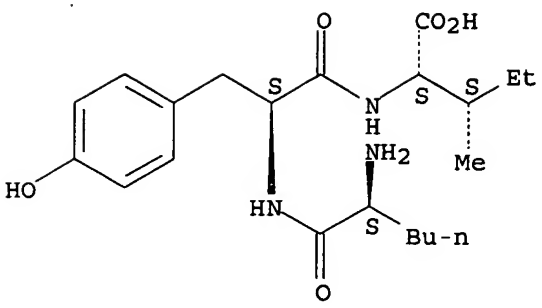
IT **154272-76-1 154272-77-2**
(binding to angiotensin IV receptor of, structural requirements for receptor binding in relation to)
RN 154272-76-1 USPATFULL
CN L-Isoleucinamide, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 154272-77-2 USPATFULL
CN L-Isoleucine, L-norleucyl-L-tyrosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.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